

Final Record of Decision for the Flathead National Forest Land Management Plan

Flathead, Lake, Lewis and Clark, Lincoln, Missoula, and Powell Counties, Montana



“ . . . for the greatest good of the greatest number for the longest time.”—Gifford Pinchot, founding Chief of the Forest Service, 1905



Cover (images described clockwise from upper left):

- South Fork of the Flathead River, Spotted Bear Ranger District
- Forwarder working on the Paint Emery Resource Management Project, Hungry Horse-Glacier View Ranger District
- Two hikers
- Snowmobiler
- View from trail to Pentagon Cabin in the Bob Marshall Wilderness (photo by Peter Borgesen)
- Fireweed
- White-tailed deer (photo by John Littlefield)

Final Record of Decision for the Flathead National Forest Land Management Plan

Flathead, Lake, Lewis and Clark, Lincoln, Missoula, and Powell Counties, Montana

Lead agency: USDA Forest Service

Responsible official: Chip Weber, Forest Supervisor
Flathead National Forest
650 Wolfpack Way
Kalispell, MT 59901
406-758-5204

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotope, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at [How to File a Program Discrimination Complaint](#) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.

Table of Contents

Introduction.....	1
<i>Forest Setting</i>	<i>1</i>
<i>Purpose and Need and Proposed Action.....</i>	<i>3</i>
<i>Engagement of State and Local Governments, other Federal Agencies, and Indian Tribes.....</i>	<i>4</i>
<i>Public Engagement.....</i>	<i>4</i>
My Decision	6
<i>Rationale for the Decision.....</i>	<i>6</i>
<i>Alternatives Considered.....</i>	<i>8</i>
<i>Environmentally Preferred Alternative</i>	<i>10</i>
<i>Components of the Land Management Plan.....</i>	<i>12</i>
<i>Role of Science</i>	<i>26</i>
<i>Findings Required by Other Laws and Regulations.....</i>	<i>28</i>
<i>Conflicts with Other Agency or Government Goals or Objectives.....</i>	<i>48</i>
Implementation	48
<i>Project, Activity, Occupancy and Use Authorization, and Resource Plan Consistency with the Land Management Plan.....</i>	<i>48</i>
<i>Maintaining the Land Management Plan and Adapting to New Information</i>	<i>49</i>
<i>Amending the Land Management Plan</i>	<i>49</i>
<i>Station Director Concurrence</i>	<i>49</i>
<i>The Effective Date of the Plan Revision</i>	<i>49</i>
Administrative Review and Objections	50
<i>Modifications Made in Response to Instructions.....</i>	<i>50</i>
<i>Contact Person</i>	<i>56</i>
<i>Responsible Official</i>	<i>57</i>

List of Tables

Table 1. Management area acres and percent	13
Table 2. Management area allocation for wilderness inventory area.....	21
Table 3. List of eligible wild and scenic rivers and their segments, preliminary classification, outstandingly remarkable values, and length	23
Table 4. Recommended special areas on the Flathead National Forest	25

Terms and Abbreviations

Term	Full name
1986 plan	Flathead National Forest Land and Resource Management Plan (USDA, 1986)
2012 planning rule	National Forest System land management planning rule (36 CFR Part 219; effective 2012, amended 2016)
assessment	Assessment of the Flathead National Forest (USDA, 2014)
amendment forests	collective term for the Helena-Lewis and Clark, Kootenai, and Lolo National Forests
draft Grizzly Bear Conservation Strategy	Draft NCDE Grizzly Bear Conservation Strategy (USFWS, 2013)
NCDE Conservation Strategy	Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem (IGBC, 2018)
the Forest	Flathead National Forest
land management plan	Flathead National Forest Land Management Plan (USDA, 2018b)
Northern Region	USDA Forest Service Northern Region (also known as Region 1)

List of Abbreviations

CFR	Code of Federal Regulations
d.b.h.	diameter at breast height
DC	desired condition (land management plan component)
DCA	demographic connectivity area
EIS	environmental impact statement
FW	forestwide (land management plan component)
GA	geographic area
GDL	Guideline (land management plan component)
GIS	geographic information system
INFISH	Inland Native Fish Strategy
MA	management area
mi	mile
mmbf	million board feet
mmcf	million cubic feet
MFWP	Montana Fish Wildlife and Parks
NCDE	Northern Continental Divide Ecosystem
NEPA	National Environmental Policy Act
NFS	National Forest System
NRLMD	Northern Rockies Lynx Management Direction
PACFISH	Pacific Fish Strategy
PCA	primary conservation area
PIBO	PACFISH/INFISH Biological Opinion
STD	standard (land management plan component)
TMDL	total maximum daily load
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service

Introduction

This record of decision (ROD) documents my decision and rationale for selecting alternative B modified as described in the final environmental impact statement (EIS) for the 2018 revision of the Flathead National Forest Land Management Plan (USDA, 2018b), hereinafter referred to as the “land management plan.” The decision implements the Forest Service’s 2012 Land Management Planning Rule (36 CFR 219) and facilitates goals of the U.S. Department of Agriculture, including promoting sound land stewardship in partnership with communities. In making my decision on the land management plan, I followed the administrative review, or objection, process as described in Subpart B of 36 CFR 219 and made modifications in response to objections (addressed under “Administrative Review and Objections” on page 50).

The ROD has been prepared according to the National Environmental Policy Act (referred to as NEPA) procedures (36 CFR 220) and includes the following:

- the rationale for approval;
- an explanation of how the plan components meet the sustainability requirements of the planning rule at 36 CFR 219.8, the diversity requirements of 36 CFR 219.9, the multiple use requirements of 36 CFR 219.10, and the timber requirements of 36 CFR 219.11;
- a statement of how the land management plan applies to approved projects and activities (36 CFR 219.15);
- documentation of how the best available scientific information was used to inform planning, the plan components, and other plan content, including the plan monitoring program (36 CFR 219.3);
- concurrence by the appropriate research station director with any part of the plan applicable to any experimental forests or experimental ranges (36 CFR 219.2(b)(4)); and
- the effective date of the plan, amendment, or revision.

For ease of discussion throughout this document, the Flathead National Forest is referred to as “the Forest” when referencing the single administrative unit, the staff that administers the unit, or the National Forest System (NFS) lands within the unit.

The assessment, land management plan, public notices, and associated environmental documents are all available online at www.fs.usda.gov/goto/flathead/fpr. The planning record includes documents that support analytical conclusions made and alternatives considered throughout the planning process. The planning record is available at the Flathead National Forest supervisor’s office, located in Kalispell, Montana.

Forest Setting

The Forest, located in the northern Rocky Mountains amidst the mountains and valleys of northwest Montana, includes approximately 2.4 million acres of public land in portions of Flathead, Lake, Lewis and Clark, Lincoln, Missoula, and Powell Counties. The Forest is uniquely positioned in the heart of the Crown of the Continent, with a complex of wilderness, roaded, and unroaded areas that border Glacier National Park and a remote area of British Columbia. The Forest is an important connector of habitats for wildlife. This highly scenic region draws visitors from around the world who support a multi-million-dollar tourism and recreation economy.

Located in one of the fastest-growing population centers in Montana, the Forest supports approximately 1,500 jobs, resulting in 50 million dollars of labor income. Forest products and recreation are currently equal in their relative role in the economy (14.8 million dollars each of labor income), with recreation supporting nearly twice as many jobs (approximately 627 jobs) as the higher-paying jobs in the forest products sector (approximately 335 jobs).

The Flathead Valley has long been the center of a forest products industry that creates jobs and products and plays an important role in the local economy. Although the number of mills and the volume of the timber harvest has declined in recent decades, the industry continues to be important to the local economy and provide a critical market for timber. Flathead County and adjoining Lake, Lincoln, and Sanders Counties derive a higher percentage of their employment from timber-related industries compared with the State of Montana or the nation.

The Forest has outstanding developed and dispersed recreation opportunities that provide for a broad and diverse range of year-round activities that range from developed ski resorts to over a million acres of designated wilderness and another nearly 500,000 acres of inventoried roadless areas. Jobs in the recreation sector bring revenue into the local economy, in which 20 percent of the jobs are tied to tourism-related industries.

There are two regionally significant ski areas: Whitefish Mountain Resort and Blacktail Mountain Ski Area. These ski areas contribute significantly to the local economy by creating jobs and attracting visitors. Motorized and nonmotorized travel and recreation are popular in the Forest (including mountain biking, hiking, snowmobiling, and driving for pleasure), hunting, fishing, camping, Nordic and downhill skiing, whitewater boating, and other water- and lake-related opportunities. Many river-based and backcountry outfitters and guides and other recreation-based companies are dependent on the Forest for their livelihood. As the largest land jurisdiction in Flathead County, the Forest serves as the backdrop for residents and plays a key role in supporting the social and economic sustainability of local communities, the State of Montana, and the broader region.

The plan area is the traditional homeland of the Kootenai and Salish peoples and, to a lesser extent, the Blackfeet people. The Confederated Salish and Kootenai Tribes of Montana, which includes the Kootenai, the Bitterroot Salish, and the Pend d'Oreille peoples, have reserved treaty rights in the plan area under the Hellgate Treaty of 1855. These treaty rights include hunting, gathering, and grazing rights on Federal lands within the plan area. The Flathead Indian Reservation, which is home to the Confederated Salish and Kootenai Tribes, shares a border with the Forest along the Forest's southwestern boundary.

The Forest contains over a million acres of designated wilderness, including the Bob Marshall Wilderness, Great Bear Wilderness, and Mission Mountains Wilderness, as well as one designated wild and scenic river, the Flathead River, which has three forks—the North Fork, South Fork, and Middle Fork.

The Forest is also critically important for fish and wildlife species. The northwestern portion of the Crown of the Continent has the highest density of grizzly bears in inland North America. The Forest is part of the Northern Continental Divide Ecosystem for grizzly bears, one of seven grizzly bear ecosystems in the continental United States.

The North and Middle Forks of the Flathead River and the South Fork of the Flathead River above Hungry Horse Reservoir have abundant, intact riparian and wetland habitats and are among the least impacted riparian systems in the Flathead River subbasin because such a large portion of their watersheds are within protected areas. Bull trout and westslope cutthroat trout migrate as adults from Flathead Lake to natal streams on the Forest to spawn.

An example of the uniqueness of the Flathead National Forest is reflected in the large quantities of the huckleberry plant that grow wild throughout the Forest. The huckleberry fruit is widely sought after by both humans and wildlife. Much like the huckleberry plant, people and wildlife are drawn to the beautiful and productive landscapes found within the boundaries of the Flathead National Forest to connect with the land and sustain themselves and their families.

Purpose and Need and Proposed Action

The proposed action was to revise the Flathead National Forest Land and Resource Management Plan (USDA, 1986), referred to in this document as the “1986 plan.” The National Forest Management Act directs the development, amendment, and revision of land management plans to provide for the multiple use and sustained yield of the products and services on Forest Service lands, including outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness (16 U.S.C. 1604(e)). The 2012 planning rule guides this planning using a collaborative and science-based approach to promote the economic, social, and ecological sustainability of national forests and grasslands and other administrative units of the NFS.

The 1986 plan provided a framework for management of all forest resources; including recreation, timber, water resources, and wildlife habitat, for the last 32 years. As forest practices, recreation uses, and species-based knowledge evolved, the plan was amended. The 1986 plan, as amended, provided measures to protect species and habitat while providing for recreational uses, generation of forest products, and development of mineral resources. The monitoring and evaluation reports indicated that implementation of the plan protected soils, treated weeds, provided habitat for threatened and endangered species, and generated forest products. The Forest continued to have a diversity of plant and wildlife species, while providing for multiple uses. However, at more than 30 years old, the 1986 plan dramatically exceeded the 10-15 year duration of plans intended by the National Forest Management Act. Since the 1986 plan was completed, there were changes in ecological, social, and economic conditions in the area, as well as changes in resource demands, availability of new scientific information, and promulgation of new policy, including the 2012 planning rule. These changes necessitated a plan revision to ensure that management direction is responsive to current issues and conditions. In particular, the plan revision addressed the following topics:

- increasing demand for recreation opportunities and their importance in supporting local economies;
- fire and fuels management direction that emphasizes active vegetation management near communities;
- new analyses needed of timber production opportunities, an important historical driver for local economies;
- conservation of wildlife and aquatic habitat, including updating grizzly bear habitat management direction and Inland Native Fish direction; and
- new policy and public interest in identifying areas for recommended wilderness and wild and scenic rivers.

The Forest Service has concurrently amended the land management plans of the Helena, Lewis and Clark, Kootenai, and Lolo National Forests (also referred to as “the amendment forests”) to incorporate habitat management direction for the Northern Continental Divide Ecosystem (NCDE) grizzly bear population. The grizzly bear amendments and related environmental documents are available online (www.fs.usda.gov/goto/flathead/gbamend). The Flathead National Forest is incorporating the NCDE grizzly bear habitat management direction as land management plan direction.

Nature of land management plan decisions

A land management plan establishes plan components in the form of desired conditions, objectives, standards, guidelines, and land suitability to ensure ecological integrity while providing people and communities with a range of social and economic benefits. The plan provides overall guidance for project- and activity-level decisions and sets consistent expectations for the types of activities permissible on the Forest.

This land management plan decision is strategic in nature. The land management plan does not authorize projects, activities or site-specific prohibitions, commit the Forest Service to take action, or dictate day-to-day administrative activities needed to carry on the Forest Service's internal operations (e.g., personnel matters, law enforcement, or organizational changes). The land management plan programmatic management direction will be implemented through the design, execution, and monitoring of site-specific activities such as relocating a trail, conducting a prescribed burn, or harvesting timber. Site-specific analysis in compliance with the NEPA will need to be conducted in order for prohibitions or activities to take place on the ground, in compliance with the broader direction of the land management plan.

Engagement of State and Local Governments, other Federal Agencies, and Indian Tribes

Local tribes and communities depend on the economic, social, and ecological benefits provided by the Forest. The Forest supports jobs and economies, local traditional ways of life, healthy wildlife populations, and clean air and water, among other benefits. Many of the issues and concerns facing the Forest, such as wildfire, require a cohesive management approach across the landscape. It is therefore essential that the representatives of local tribes, counties, as well as other Federal agencies are actively involved in the plan revision.

In addition to the opportunities described in the section on public engagement below, which are available to governmental entities, the Forest worked directly with State and local governments, other Federal agencies, and Indian tribes throughout the planning process.

Interagency meetings were convened as needed from the beginning of the revision process to provide updates on the planning process as well as to facilitate coordination with county, state, federal, and tribal land use planning and programs (USDA, 2017). These meetings enabled the Forest to better evaluate whether each interagency group member's respective planning and land use documents were or were not compatible with the land management plan, and discuss opportunities to resolve or reduce conflicts. The planning record exhibits from these meetings (planning record exhibits 00004-00021, 00307-00314; also available at <http://www.merid.org/FNFplanrevision.aspx>) demonstrate a commitment on the part of the Forest to meaningfully engage with interested and affected agencies as well as the cooperation of these entities in the development of this land management plan. The final EIS (USDA, 2018a) and planning record (ibid) document the review of the planning and land use policies of these partners, where relevant to the plan area as required by 36 CFR 219.4(b).

Public Engagement

The Forest began public participation when developing the assessment of the Flathead National Forest. To facilitate local participation, the Forest contracted with the U.S. Institute for Environmental Conflict Resolution in 2012 to develop a collaborative stakeholder engagement process. The U.S. Institute for Environmental Conflict Resolution met with Forest Service employees and a representative group of key stakeholders to determine their willingness to engage in a collaborative process convened by a neutral third party. The Meridian Institute was selected to serve in that capacity and facilitated numerous topical

work groups, an interagency group, and meetings to bring together all work groups and interested citizens. Beginning with a news release July 19, 2013, as part of the public involvement process, the Forest led field trips and held open houses to discuss existing information and trends related to a variety of conditions found on the Forest. From October 2013 through June 2014, the Forest hosted monthly public meetings with the intent to collaboratively develop plan components that the Forest could consider in the development of a proposed action (see the Meridian Institute website, <http://www.merid.org/FNFplanrevision.aspx>). The dialogue and recommendations from this public involvement process were used to help develop the land management plan revision proposed action.

A key component of the involvement and transparency of the public involvement efforts associated with this planning effort has been the information made available to the public through the use of the land management plan revision website (www.fs.uds.gov/goto/flathead/fpr). The Forest also utilized collaborative mapping tools, an online forum for gathering public comments and input on specific areas of the Forest, throughout the planning process and specifically for input on the wilderness inventory and evaluation process. The availability to provide equal opportunities to anyone who wanted to participate in the planning process was greatly enhanced through our ability to provide web-based information for the public to comment on the process as well as plan components. The land management plan revision website provides links to documents and the previous public involvement efforts.

The notice of intent on the proposed action was published in the Federal Register on March 6, 2015 (USDA, 2015). The notice of intent asked for public comment on the proposal for a 60-day period (until May 5, 2015). The comment period was subsequently extended by 10 days (until May 15, 2015). In addition, as part of the public involvement process, the agency held seven open houses to provide opportunities to better understand the proposed action so that meaningful public comments could be provided by the end of the scoping period. Using the comments from the public, State and local governments, other Federal agencies, and tribes, the interdisciplinary team developed a list of issues to address. The list was then organized by issue applicability, i.e., whether the issue was specific to the revision effort or specific to the amendment effort or applied to both. Issues that involve the amendment effort are discussed further in section 5.4 of the final EIS, Issues Used for Alternative Development.

Based upon the issues identified from the scoping process on the proposed action, the Forest prepared and published a draft EIS, with a notice of availability published in the Federal Register in June 2016. This publication of the notice of availability of the draft documents in the Federal Register began the public comment period on the draft land management plan, amendments, and draft EIS. Two open houses were held in Kalispell, Montana and Missoula, Montana during the 120-day comment period. In addition to the open houses, the planning team continued to provide information throughout the comment period to address questions. The interagency group continued to meet to discuss and provide input with respect to each agency's concerns.

The comment period ended on October 3, 2016, for the draft EIS, draft land management plan, and draft land management plan amendments. The 120-day comment period resulted in over 33,000 comments, including 568 unique letters and 33,112 form letters (these are letters identified as having overlapping content and comments) from 18 organizations. The comments were aggregated into unique concern statements, and responses were developed and are included as appendix 8 to the final EIS. The public comments and the interdisciplinary team's responses were critical to improving the analysis in the final EIS, refining plan direction, and aiding in developing the draft ROD.

Some of the specific changes made to the selected alternative in the final EIS based upon interagency and public engagement included (1) moving the recommended wilderness boundary up the slope on the Swan Front to address concerns related to fire and fuels; (2) selecting management area 6c (general forest high-intensity vegetation management) for most of the suitable timber acres within the wildland-urban

interface in the Swan Valley to address concerns related to fire and fuels; (3) carrying forward all the focused recreation area management areas from all alternatives to emphasize the potential for increased recreation opportunities available on the Forest; (4) selecting a plan component that makes mechanized transport and motorized use not suitable in areas being recommended for wilderness; and (5) adding an area of recommended wilderness in Bunker Creek that has wilderness characteristics.

The 60-day opportunity to object to the Flathead National Forest's land management plan and Regional Forester's species of conservation list, the NCDE Grizzly Bear Conservation Strategy land management plan amendments for the Helena-Lewis and Clark, Kootenai, and Lolo National Forests, or the associated final environmental impact statement ended on February 12, 2018. The Forest Service received seventy-four timely objections on the final EIS and land management plan, the associated regional forester's species of conservation concern, and/or the Northern Continental Divide Ecosystem amendments for the Lolo, Helena-Lewis and Clark, and Kootenai National Forests.

My Decision

Based upon my review of all alternatives, my consideration of the effects to the ecological, social, and economic environment, and the interagency and public engagement throughout the revision process, I selected alternative B modified for the Flathead National Forest land management plan. The selected alternative is based on alternative B from the draft EIS, with modifications in response to comments and objections, and includes features of all alternatives considered. It addresses the need for change identified during the assessment, meets the requirements of the planning rule, is responsive to local government, tribal, and public engagement, and is based upon over 30 years of knowledge gained from implementation and amendment of the 1986 land management plan.

Rationale for the Decision

I chose alternative B modified as the land management plan because it best reflects input from local government, tribes, and diverse publics on the mix of management areas. This includes areas to provide for unique ecological conditions, active management of timber products and fuel reduction, focused recreation areas, recommended wilderness areas, wild and scenic rivers, and backcountry areas that range from nonmotorized to motorized.

The land management plan emphasizes active vegetation management on 42 percent of the land that is not allocated as designated wilderness, recommended wilderness, or as backcountry nonmotorized management areas. It reflects the desire to maintain as much management flexibility as possible on the acres identified as suitable for timber production. This will allow for the provision of societal goods while ensuring that the management activities are maintaining and moving towards the desired conditions. The management allocations where active vegetation management is emphasized contribute to resilient forests and ecosystems, while providing social and economic benefits, such as enhancing the diversity of recreational experiences and contributing to a sustainable production of timber. While active vegetation management may have more potential for environmental effects and social conflicts, I am confident forestwide plan components that will guide management of these areas are sufficient to mitigate and minimize the potential adverse environmental effects.

The land management plan largely reflects the recommendations from the Whitefish Range Partnership for management of the North Fork geographic area. The discussions of this collaborative group, as well as the comments from the public at large, assisted me in the decision to modify alternative B to not allow mechanized transport and motorized use in recommended wilderness areas. This input is also why I did not select alternative C. Under alternative C, impacts to motorized users and mechanized transport users

in areas that it included as recommended wilderness were significant, and the amount of areas that would have been prohibited to these users was unacceptable.

The land management plan also includes established management area 6c (general forest high-intensity vegetation management) in wildland-urban interface areas such as the Swan Valley, where the residents have voiced concerns over fire management and their safety due to fuel loading and access concerns. The land management plan adjusts the recommended wilderness boundary in these areas so it is farther up the slope from the wildland-urban interface, in order to allow for management actions. In response to public objections, the land management plan changes the allocation of management area 6c to 6b (general forest moderate-intensity vegetation management) in four sections (a total of 1,095 acres) of the Swan Valley in the Elk Creek drainage. This accommodates the local community's concerns regarding the unique ecological conditions of the area, while still allowing for vegetation management to address fire and fuels in the wildland urban interface.

In addition, the land management plan provides the following benefits:

- It provides for management that will contribute approximately \$55 million in labor income and 1,600 local jobs to the local communities, which is an increase of \$5 million and 100 jobs over current management.
 - ♦ Forest products (primarily from timber harvest) will contribute approximately \$14.8 million in labor income (\$4.2 million more than under the existing land management plan) and 335 jobs. It is vitally important to continue to have a local timber industry that assists the Forest in achieving desired conditions while providing for the commercial sale of forest products.
 - ♦ The Forest had more than one million recreation visits in 2015; these generated \$14.8 million in local income and 627 jobs. Recreational activities are also vitally important to the local economy.
- It contributes to social and economic sustainability with an estimated production of total wood products, which includes sawtimber and non-sawtimber, similar to or above current levels. The Forest will produce an estimated sawtimber volume of 27.3 million board feet per year over the next decade. Approximately 3,140 acres will be treated through commercial timber harvest to improve vegetation conditions. As required by the 2012 planning rule, the estimated timber outputs in the land management plan objectives take into account the fiscal capability of the planning unit and are consistent with all plan components. Outputs are based on the Flathead National Forest's average budget levels for fiscal year 2012 through fiscal year 2014. However, the estimates of timber outputs may be larger or smaller on an annual basis, or over the life of the plan, if budget or other constraining factors change in the future. Modeling of the projected timber sale quantity under an unlimited budget and consistent with all plan components resulted in an average annual volume output in the first decade of 38 million board feet (7.6 million cubic feet), which is less than the sustained yield limit. Thus, with a higher budget or other opportunities to increase capacity such as shared stewardship or through new legal authorities, the annual amount of timber volume could increase to a maximum of approximately 38 million board feet per year.
- It provides for management of wildland fire, fuels, and expected fire behavior, important considerations throughout the planning process. The role of fire, both planned and unplanned ignitions, as a tool to achieve desired vegetation and wildlife habitat conditions is articulated in the plan, and direction related to its use and management is provided. The revised land management plan includes direction for landscape-scale treatments to broaden the use of prescribed fire and for cooperating on developing community wildfire protection plans.

- It includes “focused recreation areas,” which are designed to meet increased demands for recreation near local communities and to benefit local economies. These areas will offer increased visitor contact and education and opportunities for new rental cabins, new trails, new boat ramps, and improved campgrounds; and improved maintenance of trails, roads, and facilities.
- It continues to support recreation demands and contribute to the recreation economy while addressing desired ecological conditions for soils, water, fish, and wildlife. The revised management direction for motorized road access allows some additional motorized trail access to occur in grizzly bear management zone 1, outside of the Salish demographic connectivity area. The land management plan continues to maintain the opportunity for wheeled motorized vehicle use (suitable on designated roads and trails) on about 1,427 miles of NFS roads and 226 miles of NFS trails open to public motorized use for a total of 1,653 miles.
- It increases access to public lands through opportunities for new mountain bike trails and high-elevation motorized off-road vehicle loop trails. Mechanized transport (e.g., mountain bikes) is suitable on approximately 47 percent of the Forest.
- It improves snowmobiling opportunities in and around popular snowmobile riding areas. I expect this to add higher-quality motorized over-snow vehicle use opportunities in the Challenge-Skyland and Canyon Creek and Big Creek areas of the Forest. Motorized over-snow vehicle use is suitable on 31 percent of the Forest.
- It provides for key ecosystem services, such as clean water and flood control; clean air; cultural/heritage values, inspiration, spiritual values, and solitude; hunting, trapping, fishing, and wildlife viewing; production of wood products and availability of special forest products such as firewood and huckleberries; and research and education.
- It provides updated direction for vegetation that includes the identification of desired conditions for species composition and forest structure as well as for landscape patterns and ecological processes such as the role of fire across the Forest. Management direction for vegetation is more comprehensive, with the goal of sustaining the full complement of native plant and animal species and their supporting habitats. The plan direction reflects our best estimate of conditions that would maintain or restore resilient forest conditions and ecosystem integrity while addressing current and anticipated human uses of and desires for the Forest, such as its timber products or scenic values.
- It updates management direction for wildlife and aquatic species, including but not limited to lynx, grizzly bear, and bull trout, which will allow for improved and more efficient habitat management while addressing the need to actively manage the vegetation within their respective habitats.
- It updates grizzly bear habitat management direction to maintain the on-the-ground habitat conditions which contribute to an Northern Continental Divide Ecosystem grizzly bear population that is growing and expanding in distribution, but does not continue the direction from amendment 19 of the 1986 land management plan to further reduce motorized route densities. Given the improved condition of NCDE grizzly bear population and its habitat, I find it is not necessary to further reduce public access by about 518 miles.

Alternatives Considered

In addition to the selected alternative, I considered the no-action alternative and two other alternatives, which are discussed below. All reasonable alternatives to the proposed action must meet the purpose and need for change and address one or more of the significant issues. I identified those alternatives that met both the purpose and need for change and created a reasonable range of outputs, costs, management requirements, and effects from which to choose. A more detailed comparison of these alternatives can be

found in the final EIS in chapter 2. Refer to section 2.4.6 for a discussion of alternatives considered but eliminated from detailed study.

All alternatives in this document adhere to the principles of multiple use and the sustained yield of goods and services required by the Code of Federal Regulations (36 CFR § 219.1 (b)). The primary difference between alternatives is in allocation of acres by management area to meet the purpose of and need for change and address one or more of the identified issues. The following are the same under all alternatives:

- Management area and forestwide direction for desired conditions, standards, and guidelines remain constant for all action alternatives, with a few exceptions noted in section 2.4.
- Existing developed recreation sites and recreation residence special-use permits are allowed under all alternatives.
- Management direction for and location of utility and road rights-of-way, easements, and communication sites remain constant under all alternatives.
- Lands within the National Wilderness Preservation System and related plan components remain constant for all alternatives.
- Designated and eligible wild and scenic rivers remain constant under all alternatives.

The action alternatives differ in regards to grizzly bear habitat-related management direction, suitability of activities in recommended wilderness areas, timber objectives, and suitability for motorized over-snow vehicles.

Alternative A, the no-action alternative, reflects the 1986 land management plan, as amended, and accounts for current laws and regulations. New information, inventories (e.g., lands suitable for timber production, eligible wild and scenic rivers), and technologies (e.g., the Spectrum model) were used to evaluate this alternative. Output levels were recalculated for this alternative based on land management plan amendments and new sources of information. The no-action alternative retains the 1986 management direction, as amended, including management area prescriptions. This alternative serves as the baseline for comparison with the action alternatives.

Alternative B, the selected alternative, is the modified proposed action for the draft revised land management plan that was developed in response to public involvement efforts that began in 2013 and was subsequently modified based upon comments received during scoping. This alternative emphasizes moving towards desired conditions while providing a balance of ecological, social, and economic sustainability. Alternative B manages approximately 8 percent of the Forest as recommended wilderness (MA1b), 13 percent as backcountry (MA5), and 30 percent as general forest (MA6). Twenty-one percent of the Forest would be suitable for timber production.

Alternative C has more acres of recommended wilderness than the other alternatives and less emphasis on active vegetation management. Primitive or semiprimitive nonmotorized recreational settings would be increased by identifying motorized use and mechanized transport as not suitable in recommended wilderness areas. This alternative also adds several plan components (the same as those under alternative 3 in volume 3 of the final EIS for the amendment forests) that provide additional protections for grizzly bear habitat.

Alternative D emphasizes active vegetation management, including timber harvest, to achieve desired conditions. There is an expected higher level of vegetation management intensity with more acres allocated as management area 6c, although the total acreage suitable for timber production is similar to the modified proposed action. There is more emphasis on semiprimitive motorized and roaded recreation

settings. No recommended wilderness is included in alternative D. In this alternative, additional focused recreation areas (management area 7) are included, such as an area featuring off-highway single-track motorized recreational opportunities as well as additional areas of nonmotorized settings.

Federal agencies are required to rigorously explore and objectively evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). Public comments received in response to the proposed action provided suggestions for alternative methods for achieving the purpose and need. Some of these alternatives were outside the scope of this revision effort or duplicative of the alternatives considered in detail. Over 15 alternatives (or alternative variations) were considered but dismissed from detailed consideration for reasons summarized in chapter 2 of the final EIS.

After considering the analyses of alternatives A through D, and the alternatives considered but eliminated from detailed study, I find that a reasonable range of alternatives has been carefully evaluated in compliance with NEPA procedures. Although consideration of budget constraints reduced the variation in the effects of the actions across the alternatives, the analysis in the final EIS covers a full spectrum of management intensity ranging from an emphasis on natural ecological processes in alternative C to a more managed, commodity output and motorized recreation emphasis in alternative D. All action alternatives are realistic, implementable, and responsive to the land management plan revision topics.

Environmentally Preferred Alternative

NEPA regulations require agencies to specify the alternative or alternatives that are considered to be environmentally preferable (40 CFR 1505.2(b)). The environmentally preferable alternative is “the alternative that will best promote the national environmental policy as expressed in NEPA’s section 101 (42 U.S.C. 4321). Ordinarily, the environmentally preferable alternative is that which causes the least harm to the biological and physical environment; it is also the alternative which best protects and preserves historic, cultural, and natural resources” (36 CFR 220.3).

I find, based upon the laws and regulations guiding NFS lands management, that alternative B modified is the environmentally preferred alternative. When compared to the alternatives analyzed in detail, it best contributes to, and moves the Forest towards, ecological, social, and economic sustainability and desired conditions that will benefit future generations (see the explanation of how the plan components meet the requirements of the 2012 planning rule, in the section titled “Findings required by other laws and regulations” of this ROD). Although alternative C would allow the fewest acres available for mechanical ground-disturbing activities and the fewest acres allowing motorized use, it does not address the six goals of NEPA as well as alternative B modified does. I base my finding on the following comparison showing how the alternatives address the goals of section 101 of NEPA.

1. Fulfill the responsibilities of each generation as trustees of the environment for succeeding generations.

Alternative B modified emphasizes moving forest conditions towards desired future conditions while contributing to ecological, social, and economic sustainability. Alternative B modified provides the most movement towards vegetation desired conditions while providing sustainable levels of timber harvest similar to current levels. The higher timber harvest levels under Alternative B modified versus alternative C provides the Forest’s sustainable share of products and uses demanded by the public, with a higher probability of improving and restoring vegetation for future generations than alternative C. Alternative A would provide the least improvement towards desired conditions. Alternative D emphasizes more active vegetation management, including timber harvest, to achieve desired conditions. However, because of an emphasis on production of wood products, it does not move

towards vegetation desired conditions as much as alternative B modified. There are more acres suitable for timber production in this alternative, particularly acres of management area 6c, with an expected higher level of management intensity. Alternative B modified provides more areas of recommended wilderness than alternative D and provides plan components to protect the wilderness characteristics of these areas.

2. Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.

Alternative B modified achieves maintenance of a safe, healthful, productive, and aesthetically and culturally pleasing Forest better than the other alternatives because it provides the best mix of resource utilization, active and passive management, and motorized and nonmotorized recreation uses along with the safeguards provided by standards and guidelines for maintaining water quality, scenery, and wildlife habitat. Alternative B modified provides recommended wilderness with additions and reductions to alternative B as suggested by the public. Alternative B modified also provides timber harvest levels similar to current alternative A levels and maintains multiple-use access to important recreational areas better than alternative C. Although alternative D provides higher levels of timber harvest and access opportunities, it does not provide the levels of recommended wilderness that are currently enjoyed and desired on the Forest.

3. Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.

The beneficial uses that are most varied between alternatives and that I considered in this finding are wood fiber production and a reasonable range of motorized and nonmotorized recreation opportunities. Alternative B modified achieves a higher level of reasonable, sustainable beneficial uses than alternative C. Alternative D provides higher levels of wood fiber production and motorized recreation allocations, but it does so at the expense of nonmotorized recreation allocations. Although the beneficial uses of alternative A are similar, alternative B modified also provides the most movement of vegetation towards desired conditions, which will provide for more resistant and resilient forests. This improves the health of our forests and watersheds, enhances wildlife habitat, and reduces undesirable and unintended consequences.

4. Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.

Part of preserving our historic and cultural national heritage is recognizing that *humans* are a natural aspect of our national heritage—humans have utilized the physical and cultural resources offered by the Forest for thousands of years. Recognizing this, I find that the best way to preserve this heritage, and an environment that supports diversity and variety of choice, is to manage for a national forest that provides for physical resource use and the appropriate protection of cultural resources. Based upon the public engagement efforts, tribal consultation, and the effects of each alternative displayed in the final EIS, I find that alternative B modified meets this goal better than the other alternatives. It improves on alternative A and provides the best assortment of multiple uses between alternative C's emphasis on wilderness values and protection of backcountry and alternative D's emphasis on achieving desired conditions through mechanical means.

5. Achieve a balance between population and resource use, which will permit high standards of living and a wide sharing of life's amenities.

The public demands a variety of products and uses that can be provided by their national forests. National forest system lands and resources are evaluated as important local resources that contribute

to the quality of life in the region. The final EIS alternative analysis compares the various values the public uses to determine their quality of life, varying from economic resource extraction values (timber harvest and minerals) to less tangibly defined resources such as wilderness character and semiprimitive recreation opportunities. The challenge is in defining the balance sought in this goal, and I find that alternative B modified achieves that balance. Alternative B modified provides more resource use than alternative C but more opportunities for semiprimitive recreation opportunities than alternative D.

6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

I find alternative B modified enhances the quality of renewable resources and provides sustainable use of renewable resources. The standards and guidelines and the management area allocation under alternative B modified provide for levels of resource use that are similar to current levels of alternative A while providing protection measures for backcountry and recommended wilderness areas. Alternative C emphasizes more passive management and a greater amount of backcountry and recommended wilderness, but it does so at the expense of resource utilization and does not achieve as much vegetation restoration as alternative B modified.

Components of the Land Management Plan

The land management plan has been prepared in compliance with the Forest Service's 2012 Land Management Planning Rule at 36 CFR Part 219. The plan meets the specific rule requirements at sections 219.8 – 219.11 as described below.

The land management plan provides for an integrated set of plan components that are identified forestwide as well as within particular geographic areas and management areas. The Forest has six geographic areas with unique characteristics and associated plan components to serve as a place-based approach to providing multiple uses.

Management Areas

The land management plan establishes 7 broad management areas (corresponding to numbers 1 through 7) across the Forest that have been further refined into 16 management areas categories (designated by alpha-numeric codes, see table 1). Each management area has management direction specific to individual parcels of land within the Forest that represents a management emphasis for that parcel of land.

The management area direction includes desired conditions, standards, guidelines, and suitability of certain uses within that management area. In instances where management area allocations overlap (e.g., an area that is management area 1b, recommended wilderness, may also be management area 4a, a research natural area), the acres were calculated based upon the following hierarchy:

1. designated wilderness,
2. designated wild and scenic rivers,
3. recommended wilderness,
4. research natural areas,
5. eligible wild and scenic rivers,
6. experimental and demonstration forests, and
7. special areas.

Table 1. Management area acres and percent

Code	Management Area Category	Acres^a (percent)
1a	Designated wilderness	1,072,040 (45%)
1b	Recommended wilderness	190,403 (8%)
2a	Designated wild and scenic rivers	17,592 (1%)
2b	Eligible wild and scenic rivers	20,473 (1%)
3a	Administrative areas	435 (< 1%)
3b	Special areas	1,579 (< 1%)
4a	Research natural areas	7,820 (< 1%)
4b	Experimental and demonstration forests	11,544 (< 1%)
5a	Backcountry nonmotorized year-round primitive	149,258 (6%)
5b	Backcountry motorized year-round (motorized vehicle use only on designated roads, trails, and areas)	50,002 (2%)
5c	Backcountry motorized over-snow vehicle opportunities (on designated routes and areas)	107,656 (4%)
5d	Backcountry motorized wheeled vehicle use on designated roads, trails, and areas from April 1 to November 30	9,854 (< 1%)
5a-d	Backcountry total	316,770 (13%)
6a	General forest low-intensity vegetation management	123,693 (5%)
6b	General forest medium-intensity vegetation management	298,770 (12%)
6c	General forest high-intensity vegetation management	270,799 (11%)
6a-c	General forest total	693,262 (28%)
7	Focused recreation areas	60,888 (3%)
--	Total acres	2,392,807

a. Acres and percentages are from GIS data set. The official acres for NFS lands and wilderness areas can be found in the land area report, <http://www.fs.fed.us/land/staff/lar-index.shtml>.

Contribution to social and economic benefits (36 CFR 219.8(b))

The multiple uses of the Forest contribute to local, regional, and national economies. Forestwide plan components guide the Forest's contributions to social and economic sustainability, by providing for timber production and recreational opportunities, partnerships and coordination, cultural resources and uses, areas of tribal importance, and research and education. The land management plan emphasizes working closely with partner agencies, tribes, Federal, State, and county government, universities, local schools, nongovernmental organizations, and private landowners to achieve joint management goals.

The land management plan will enhance or maintain the multiple uses and ecosystem services provided by the Forest (36 CFR 219.10(a)). The benefits to people (i.e., the goods and services provided) include carbon sequestration and climate regulation; forest products such as wood products and huckleberries; water quality and quantity; flood control; clean air; outdoor recreation; scenery; habitat for fish and wildlife; cultural/heritage values, inspiration, spiritual values, and solitude; hunting, trapping, fishing, and wildlife viewing; and research and education.

Plan direction is designed to manage for resilient and resistant forest conditions so forests can adapt to whatever pressures and uncertainties the future may hold. Resilient forest conditions also provide important social and economic benefits, including enhancing the diversity of recreational opportunities, maintaining scenic integrity objectives, and contributing to a sustainable production of timber and other forest products.

Sustainable Recreation (36 CFR 219.10 (b)(1)(i))

Forestwide plan components guide the Forest's sustainable recreation, including recreation settings, opportunities, access, and scenic character. The land management plan establishes objectives for increasing and enhancing recreational opportunities and establishes focused recreation areas. Sustainable recreation is partly derived by the mapping of desired recreation opportunity spectrum classes that range from primitive to urban settings as well as through forestwide recreation management plan components. This integrated direction contributes to social, economic, and ecological sustainability. There are a number of objectives to increase and enhance recreational opportunities, such as adding rental cabins to the national reservation system, building new mountain biking trails close to communities, constructing new motorized trail connectors that provide high-elevation loop opportunities, and improving developed campgrounds.

Focused recreation areas are management areas located near communities or in areas that can provide additional recreation opportunities to meet increased demands for recreation and are intended to benefit local economies. The emphasis of each focused recreation area varies, ranging from high visitor use areas such as Big Mountain to quieter trail systems with community access such as Lion Lake or Krause Basin. In focused recreation areas, recreation will be enhanced through increasing trail, road, and facility maintenance; increasing visitor contact and education; and/or adding rental cabins to the national reservation system, constructing new trails and boat ramps, and improving campgrounds. Management of these areas will accommodate existing as well as additional recreation growth and is intended to benefit local economies by having robust recreation settings that are responsive to changing conditions and changing use patterns and demands.

The land management plan helps connect people to nature by focusing on interpretation and education to enrich visitors' experience of the Forest, engaging youth in hands-on outdoor experiences, and developing recreational opportunities close to communities. The plan calls for making the best use of new technologies such as social media, the Internet, self-guided media using smartphones and other devices to help maintain relevancy for the audience.

Timber (36 CFR 219.11)

The land management identifies lands suited and not suited for timber production (36 CFR 219.7(c)(2)(vii) and 219.11). The lands suitable for timber production and the role of timber harvest in meeting ecosystem management and social and economic objectives has changed since the Flathead's 1986 land management plan was developed. The land management plan presents new plan components for lands suitable for timber production and for lands where timber harvest is allowed. These plan components will facilitate an active vegetation management program of work to meet ecosystem and socioeconomic objectives.

Lands suitable for timber production were determined following 36 CFR 219.11(a) and Forest Service Handbook direction (1909.12 chap. 61). Under the land management plan, approximately 465,200 acres (19 percent of the Forest) are suitable for timber production, with the remaining approximately 1,927,600 acres not suitable for timber production. The land management plan also identifies areas not suitable for timber production but where timber harvest is allowed for such purposes as protection or enhancement of biodiversity or wildlife habitat, fuels management, insect and disease mitigation, salvage, recreation or scenic-resource management, or for research or administrative studies. Approximately 447,200 acres (19 percent of the Forest) are not suitable for timber production but allow timber harvest.

The planning rule requires land management plans to provide information regarding possible actions that may occur on the plan area during the life of the plan, including the planned timber sale program, timber harvesting levels, and the proportion of probable methods of forest vegetation management practices

expected to be used (16 U.S.C. 1604(e)(2) and (f)(2)). The plan revision addresses this requirement through establishing management areas, objectives reflecting anticipated budget levels, and description of possible management actions and strategies (see appendix C of the land management plan).

Timber harvest is conducted to provide for societal goods and to maintain or move vegetation on the Forest towards desired conditions. Under the land management plan, the projected timber sale quantity for the first decade is 27.3 million board feet per year and the projected wood sale quantity is 6.3 million cubic feet per year. The land management plan reflects the desire to maintain as much management flexibility as possible on the acres identified as suitable for timber production while ensuring that the management activities on these lands and all lands are maintaining and moving towards the desired conditions. It is vitally important to maintain a local timber industry that assists the Forest in this management through the commercial sale of forest products. The selected alternative best provides the needed management flexibility, however I remain concerned that our ability to meet identified outputs will be difficult in the face of declining budgets and the increasing cost of litigation related to forest management activities. As required by the 2012 planning rule, the estimated timber outputs take into account the fiscal capability of the planning unit and are consistent with all plan components. They are based on the Forest's average budget levels for fiscal year 2012 through fiscal year 2014. However, the estimates of timber outputs may be larger or smaller on an annual basis, or over the life of the plan, if budget or other constraining factors change in the future. If opportunities for shared stewardship, additional legislative authorities, or partnerships increases the timber output capacity, modeling of the projected timber sale quantity under an *unlimited budget* and consistent with all plan components resulted in an average annual volume output in the first decade of 38 million board feet (7.6 million cubic feet).

Maximum quantity of timber

The land management plan identifies the maximum quantity of timber that may be removed from the plan area (36 CFR 219.7 and 219.11 (d)(6)). Based on Forest Service Handbook direction (1909.12 chap. 64.3), this maximum is termed the sustained yield limit and is the volume of timber that could be produced in perpetuity on lands that *may be suitable* for timber production. Lands that *may be suitable* for timber production are those that are legally available and technically feasible for harvest (forested lands with no potential for irreversible soil or watershed damage and where regeneration can be ensured). The timber suitability analysis identified 737,400 acres on the Forest that *may be suitable* for timber production. The calculation of the sustained yield limit is not limited by land management plan desired conditions, other plan components, or the Forest's fiscal and organizational capabilities. The sustained yield limit is determined to be 25.4 million cubic feet average annual volume.

Contribution to ecological benefits (36 CFR 219.8(a))

Throughout development of the plan, the best available scientific information and public engagement efforts were used to provide the basis and support for each step, including disclosing data gaps and scientific uncertainty. I have reviewed the scientific information, including information submitted by the public as well as new scientific information published since I released the final EIS and draft ROD (FNF, 2018; Kuennen, 2018a, 2018b) and determined that the best available scientific information was used to inform my decision.

The land management plan includes plan components that address the composition, structure, function, and connectivity of vegetation types. The land management plan also describes potential vegetation types, system drivers, ecological processes, and stressors and threats.

Plan components are designed to provide for the maintenance and improvement of vegetation conditions within the fire-adapted ecosystems that are prevalent on the Forest. Plan components promote vegetation and landscape conditions that reflect the natural range of variation and are resilient in the face of future

stressors and threats such as fire, drought, or invasive species. For example, plan direction emphasizes managing for tree species that are more fire, insect and/or disease-resistant; able to grow to very large sizes and live for several centuries; and able to regenerate readily after fire or other disturbances.

Managing for vegetation conditions that reflect a natural range of variation and are resilient in the face of future stressors and threats benefits multiple resources, including wildlife, fish, soil and water. It benefits plant and animal species by providing habitat conditions that support the full diversity of native species, including federally designated threatened, endangered, candidate, and proposed species and species of conservation concern (see appendix 6 of the final EIS for lists of these species). Forestwide plan components address maintaining and/or restoring key ecosystem characteristics associated with terrestrial and aquatic ecosystems and rare aquatic and terrestrial plant and animal communities.

The land management plan will maintain the existing high quality of the water, wildlife, and forest resources across the entire Forest. Large, relatively undeveloped areas will be maintained, mainly within designated wilderness and inventoried roadless areas, which together comprise about 65 percent of the Forest area. These areas have limited human impacts, and the vegetation will continue to be influenced largely by natural disturbances such as fire or insect activity. Accordingly, these disturbances will largely determine the vegetation conditions and patterns that will exist, and the associated wildlife habitat conditions and diversity. The land management plan articulates the role of fire, both planned and unplanned ignitions, as a tool to achieve desired vegetation and wildlife habitat conditions, and provides direction related to its use and management. The land management plan also provides direction for fuels management to protect identified values, such as in wildland-urban interface areas. The land management plan includes direction for landscape-scale treatments to broaden the use of prescribed fire and for cooperating on developing community wildfire protection plans.

Diversity of plant and animal communities (36 CFR 219.9)

The Forest used a complementary ecosystem and species-specific approach (also called coarse filter/fine-filter approach) to consider at-risk terrestrial and aquatic species, species groups, ecological systems, and watersheds including in the development of land management plan alternatives, management strategies, as well as in the monitoring program. This approach is consistent with the requirements of 36 CFR 219.8 and 219.9, and the Forest Service Handbook 1909.12 chapters 10 and 20.

Effects to at-risk species, including threatened and endangered species and species of conservation concern, are disclosed in sections 3.2 (aquatics), 3.5 (plants), and 3.7 (animals) of the final EIS. These sections describe the ecological conditions, key ecosystem characteristics, and land management plan components that will maintain at-risk species, and they reference the applicable appendices. Most habitat needs of at-risk species and species of conservation concern are met by plan components for aquatic and terrestrial ecosystems (coarse filter). For some species or species groups, the revised land management plan has plan components to meet species-specific needs. I have reviewed the ecosystem plan components and included species-specific plan components where needed to maintain viable populations within the plan area, and I have also reviewed the effects disclosed in the final EIS.

Ecosystem and species-specific plan components for plants and animals

Forestwide plan components will maintain and/or restore key ecosystem characteristics associated with terrestrial and aquatic ecosystems and rare aquatic and terrestrial plant and animal communities. The land management plan:

- provides plan components to maintain, improve, or restore key characteristics of ecosystems, such as vegetation composition, structure, ecological processes, and connectivity;

- includes plan components for at-risk species which currently include 8 threatened, candidate, or proposed species and 29 species of conservation concern (26 plant species and 3 animal species);
- where appropriate, combines the at-risk species with species groups and links the species groups with the key ecosystems and ecosystem characteristics (see chapter 2 of the land management plan and sections 3.3 and 3.7 and appendix 6 of the final EIS); and
- includes plan components to provide habitat conditions for species that are used or enjoyed by the public for hunting, fishing, subsistence, or viewing.

The land management plan provides a mix of management area, geographic area, and forestwide plan components to maintain, improve, and restore wildlife habitat. I find that the management direction in the land management plan addresses key aquatic and riparian ecosystem characteristics and their integrity and will maintain, improve, and restore forest and ecosystem resilience in light of a changing climate and uncertain future environment.

I find that the land management plan provides for maintenance and protection of old-growth forest and associated stand structural components (such as very large trees and snags), which are key components of the ecosystem and important to maintaining species diversity. Not only does the land management plan provide direction specific to controlling management activities that might occur within identified old-growth forest, but it also provides direction related to vegetation treatments designed to protect adjacent old-growth forests, retain forest structural characteristics that are associated with old-growth forest (such as very large live or dead trees), and promote the development of old-growth forest over the long term.

Along with fish habitat and water quality, wildlife habitat is emphasized in riparian management zones. Riparian management zones will provide high-quality habitat for numerous species. The revised land management plan includes multiple plan components, including standards and guidelines, to conserve these areas. Riparian management zones are not suitable for timber production, but allow timber harvest consistent with desired conditions. Some categories of riparian management zones are wider than in the 1986 land management plan. I have added plan components to emphasize habitat connectivity by limiting distance to cover (elements of the environment used by an animal for hiding) and road building in riparian management zones across the Forest.

Outside of riparian management zones, forests in management areas 6b and 6c, some management area 7 lands, and the Miller Creek Demonstration Forest (management area 4b) are suitable for timber production. In areas suitable for timber production, the production of timber is not the sole driver of project-level activities. Timber management in these areas and those that allow timber harvest for purposes other than production (management areas 2a and 2b in scenic or recreation segments, 3a, 3b, 4a, 4b [Coram Experimental Forest], 5a, 5b, 5c, 5d, 6a, and part of 7), along with prescribed burning and other management tools, will be used to make progress towards desired conditions and maintain habitat conditions for at-risk plant and animal communities while restoring highly diverse ecosystems that provide for ecological integrity as well as socioeconomic needs.

The land management plan includes 693,262 acres in general forest low-, medium-, or high-intensity vegetation management (management areas 6a, 6b, or 6c) and 60,888 acres in focused recreation areas (management area 7). These areas comprise about 31 percent of the Forest and emphasize a more active vegetation management approach to achieve desired conditions for vegetation and other resources.

The land management plan includes 1,072,040 acres in designated wilderness (management area 1a), about 190,403 acres in recommended wilderness (management area 1b), and about 316,770 acres (13 percent) in backcountry (management areas 5a through 5d). These management areas comprise about 66 percent of the Forest and emphasize natural processes with little human disturbance. In my selection of

alternative B modified, I recognize the importance of large undeveloped areas and their role in maintaining existing water quality, wildlife habitat connectivity and security, and the diversity of conditions that we currently enjoy on the Forest. Large, relatively undeveloped areas have limited human impacts, with vegetation influenced largely by natural disturbances such as fire or insect activity. Accordingly, these disturbances largely determine the vegetation conditions and patterns and the associated wildlife habitat conditions and diversity. I recognize that there is inherently less certainty and control over the natural disturbances and the forest conditions that may occur within the large undeveloped areas. Fire will also be an important management tool in these areas.

The plan and analysis focus on 8 groups of key ecosystems/ecosystem characteristics that provide habitat for associated animal species (final EIS volume 2, section 3.7.4). Plan components related to vegetation and potential vegetation types emphasize the close interrelationship between vegetation conditions and key ecosystem characteristics for diverse wildlife (e.g., old-growth, early successional stages of the forest, burned forest and dead or decadent tree habitat, riparian habitat, and habitat connectivity). Additionally, the plan provides for ecosystem services and multiple uses, including outdoor recreation, range, timber, watershed, wildlife, and fish. Plan components for wildlife are integrated with plan components for ecosystem services and multiple uses (36 CFR 219.10).

By working toward the goals of ecosystem integrity and ecosystem diversity with connected habitats that can absorb disturbance, I expect that over time, management will maintain and restore ecological conditions which provide for diversity of plant and animal communities and support the abundance, distribution, and long-term persistence of native species. Ecosystem and species-specific plan components in the revised land management plan will be sufficient to maintain the biological diversity of the Forest and the integrity of its ecosystems, including composition, structure, function, and connectivity. I find that the management direction in the revised land management plan addresses key aquatic and riparian ecosystem characteristics and their integrity. The land management plan will maintain, improve, or restore ecosystem resilience in light of a changing climate and uncertain future environment. The revised land management plan will provide the ecological conditions to maintain the diversity of plant and animal communities and support the persistence of most native species in the plan area in accordance with Section 219.9 of the 2012 planning rule.

Management for species of conservation concern

The regional forester of the USDA Forest Service Northern Region identified 29 species of conservation concern on the Flathead National Forest (see the Northern Region SCC website <http://bit.ly/NorthRegion-SCC>). Species of conservation concern are defined as plant and animal species that are known to occur in the plan area and for which there are substantial concerns for the persistence of the species. Several data sources, including but not limited to NatureServe and the Montana Natural Heritage Program, provided the best available scientific information to identify these species and associated ecological conditions. Most habitat needs of species of conservation concern are met by plan components for aquatic and terrestrial ecosystems (coarse filter). For some species or species groups, the land management plan has plan components to meet species-specific needs (fine filter).

In accordance with 36 CFR 219.9(b)(1), I have reviewed ecosystem plan components and included species-specific plan components for species of conservation concern as needed. I find that the land management plan will provide the ecological conditions necessary to maintain viable populations of all identified species of conservation concern within the plan area, with the exception of two terrestrial species—the black swift and the flammulated owl. For the black swift and flammulated owl, I find that the land management plan includes plan components, including standards and guidelines, to maintain, improve, and restore ecological conditions within the plan area to contribute to maintaining a viable

population of these two species within their range. My conclusions are based on the biological analysis and evaluation documented in sections 3.2, 3.5, and 3.7.4 of the final EIS.

Management for threatened, endangered, proposed, and candidate species

The Canada lynx, grizzly bear, bull trout, and water howellia are listed as threatened species. The status of the wolverine and meltwater stonefly is proposed species, and the status of the whitebark pine is a candidate species. The Forest consulted with the USFWS on threatened, endangered, and proposed species. The Forest received a concurrence letter and biological opinion in November 2017 (USFWS, 2017a). The USFWS also provided the Forest with its conclusions on recovery of the grizzly bear, Canada lynx, bull trout, and water howellia under section 7(a)(1) of the Endangered Species Act (see the section below on the Endangered Species Act for more details). The land management plan contains plan components that will contribute to the recovery of the federally listed threatened or endangered species on the Forest and their designated critical habitat. Although activities may affect individuals of federally listed species, plan components are designed to contribute to the recovery of populations on the Forest and their designated critical habitat. New projects will implement reasonable and prudent measures and terms and conditions for listed species, as included in the programmatic biological opinion, unless modified by future consultation with the USFWS. Proposed and candidate species are not addressed under section 7(a)(1), but plan components support their conservation.

I have reviewed ecosystem plan components and species-specific plan components for federally listed species in the land management plan. In accordance with the Endangered Species Act and 36 CFR 219.9(b)(1), I find that the land management plan will provide the ecological conditions necessary to contribute to the conservation and recovery of federally listed threatened and endangered species and to conserve proposed and candidate species. My conclusions are based on the analysis documented in section 3.7.5 of the final EIS, the biological assessment (Kuennen, Van Eimeren, & Trechsel, 2017), and the USFWS biological opinion and concurrence letter (USFWS, 2017a) (see the Endangered Species Act section of this ROD for more details).

Administrative recommendations

The land management plan includes recommendations to Congress for lands suitable for inclusion in the National Wilderness Preservation System. In addition, 24 rivers have been identified as having outstandingly remarkable values and been determined eligible for inclusion in the National Wild and Scenic Rivers System (36 CFR 219.7(2)(v) and (vi)).

Recommended wilderness

The wilderness recommendation is a preliminary administrative recommendation that will receive further review and possible modification by the Chief of the Forest Service, the Secretary of Agriculture, and the President of the United States. Congress has reserved the authority to make final decisions on wilderness designation. Plan implementation is not dependent upon subsequent action-related recommendations for wilderness designation.

The information considered in making this administrative recommendation for each area recommended for inclusion in the National Wilderness Preservation System is available in appendix G of the land management plan.

The question of which areas, if any, to recommend for wilderness was the most significant issue in this planning process generating the most comments and interest. Many people favor recommending additional areas for wilderness while many others oppose any recommendations. After considering the many comments received, reviewing the evaluations of the wilderness characteristics of each area, and

reflecting on the management tradeoffs across the forest, I am recommending to Congress the addition of 190,403 acres to the National Wilderness Preservation System. Four of the recommended areas are adjacent to existing wilderness and one of the recommended areas is the result of collaborative agreement from a diverse stakeholder group with members from the timber industry, motorized and mechanized recreation communities, and environmental organizations. All the recommended areas have the social and ecological characteristics that warrant Congressional consideration and received public comment in favor of recommendation. These recommended wilderness areas are:

- Tuchuck-Whale (79,821 acres) in the North Fork geographic area.
- Elk Creek (1,442 acres), an addition to the Mission Mountain Wilderness and Swan Front (42,534 acres), an addition to the Bob Marshall Wilderness, both in the Swan Valley geographic area.
- Java-Bear Creek (1,824 acres): and Slippery Bill-Puzzle (12,393 acres) in the Middle Fork geographic area.
- Jewel Basin (18,462 acres), in the Hungry Horse geographic area.
- Limestone-Dean (15,026 acres) and Alcove-Bunker (18,901 acres), additions to the Bob Marshall Wilderness in the South Fork geographic area.

I arrived at my decision on recommended wilderness after extensive engagement with interested stakeholders, including local governments, tribes, and the public, and consideration of all sides of the issue. There are those who would like additional acres because of their values for places on the Forest they consider special, or because they believe recommended wilderness management is the best strategy to protect wildlife and aquatic resources. There are also those that prefer I don't recommend any additional areas because they believe recommended wilderness management is too restrictive. As a land manager, I carefully considered a range of land management allocations, recreation uses, and boundary adjustments across the alternatives to determine the mix of land and resource uses that would best meet public needs.

I believe the lands I'm recommending provide high-quality areas for those that value wilderness characteristics, while minimizing the effects of the inherent tradeoffs for those that value other management opportunities and allocations. Much of the wilderness inventory that I'm not recommending for wilderness is allocated to backcountry management. Although there will be some motorized recreation activity and limited vegetation management with those management areas, the final EIS demonstrates management will protect headwater habitats, contribute to high water quality on the Forest (section 3.2.8), and contribute to high levels of habitat security for grizzly bears and other wildlife (sections 3.7.4 and 3.7.5).

I have included plan components to protect and maintain the ecological and social characteristics that provide the basis for each area's suitability for wilderness recommendation. One of these plan components indicates mechanized transport and motorized use are not suitable (MA1b-SUIT-06) in recommended wilderness areas. I have included this plan component in my final decision because I believe it is necessary to protect and maintain the ecological and social characteristics that provide the basis for their wilderness recommendation (described in appendix G of the land management plan). Although a number of commenters and objectors expressed concern that the management of recommended wilderness creates "de facto wilderness areas" in lieu of action by Congress, the land management plan does not create wilderness. The Forest Service has an affirmative obligation to manage recommended wilderness areas for the social and ecological characteristics that provide the basis for their recommendation until Congress acts. The land management plan does not allow for continued uses that would affect the wilderness characteristics of these areas and possibly jeopardize their designation as wilderness in the future.

It is important to note that this programmatic plan decision does not authorize any activities or prohibit public uses. Rather it will guide the future site-specific decisions needed to make progress towards the desired conditions found throughout the plan. The areas I have recommended do not currently have extensive existing mechanized transport use (96 miles of trails) or motorized over-snow vehicle use (344 acres). However, I will initiate site-specific planning per the land management plan's suitability direction within 3 years from the date of this decision.

Management of the lands within the wilderness inventory that are not recommended

All lands within the wilderness inventory were evaluated for wilderness characteristics, but only 30 percent of those lands were allocated as recommended wilderness. The final EIS analyzed alternative management area allocations for the wilderness inventory lands, with the final allocations identified in table 2. The plan components associated with each management area, together with forestwide and geographic area plan components, is the management direction provided in the plan for those lands. Therefore, these lands will not be managed specifically to protect wilderness characteristics.

Overall, the majority of these lands (45 percent) are within backcountry management areas 5a-5d, which provide for semiprimitive nonmotorized and semiprimitive motorized recreation opportunities that augment the spectrum of recreation settings from primitive to rural on the Forest. The other management area allocations are as follows: 6a (9 percent), 6b (9 percent), and 2a or 2b (4 percent). It is important to note that the initial inventory was intended to be reasonably broad and inclusive, based upon the inventory criteria, and that the inventory was not and is not a designation that conveys or requires a particular kind of management.

Table 2. Management area allocation for wilderness inventory area

Wilderness inventory area name	Percent of wilderness inventory area that is recommended for wilderness¹ and name of the recommended wilderness area(s)	Other management area allocations²
Beaver Lake	0	5c (15%), 6a (68%), 6b (17%)
Bob North	38 percent Limestone-Dean recommended wilderness area Alcove-Bunker recommended wilderness area	2a (2%), 2b (5%), 5a (35%), 5c (14%), 6a (3%), 6b (4%)
Canyon	0	5a (47%), 5c (12%), 6a (12%), 6b (3%), 7 (26%)
Coal	0	5a (66%), 5c (8%), 6a (10%), 6b (16%)
Cold Creek	0	5c (23%), 6b (77%)
Crane Porcupine	0	6a (59%), 6b (39%) 6c (2%)
Demers	0	2a (1%), 5a (73%), 6b (25%)
Elk Creek	18 percent Elk Creek recommended wilderness area	2b (14%), 5a (26%), 6b (43%)
Essex	8 percent Java-Bear Creek recommended wilderness area	2a (8%), 5a (19%), 5c (36%), 6a (20%), 6b (4%), 6c (5%) 7 (1%)
Fatty Creek	0	3b (2%), 5a (3%), 5c (31%), 6b (63%)
Glacier Creek	0	2b (32%), 3b (47%), 6a (1%), 6b (20%)

¹ This reflects the actual amount (dual or multiple allocation) of management area 1b (recommended wilderness).

² This reflects all of the management areas within the wilderness inventory area

Wilderness inventory area name	Percent of wilderness inventory area that is recommended for wilderness¹ and name of the recommended wilderness area(s)	Other management area allocations²
Hungry Horse Reservoir East	0	5a (51%), 5c (24%), 6a (10%), 6b (15%)
Hungry Horse Reservoir West	11 percent Alcove-Bunker recommended wilderness area Jewel Basin recommended wilderness area Swan Front recommended wilderness area	2b (2%), 5a (11%), 5b (27%), 5c (25%), 5d (5%), 6a (8%), 6b (8%), 6c (2%), 7 (1%)
Jim Creek	0	5c (31%), 6b (69%)
Le Beau	0	2b (13%), 4a (52%), 6a (5%), 6c (4%)
Lindbergh Lake	0	2b (4%), 5a (45%), 5c (11%), 6b (40%)
Meadow Lake	0	2b (2%), 5a (49%), 5c (17%), 6b (27%), 6c (6%)
North Fork Coal Creek	0	5c (26%), 6b (74%)
Piper Creek	0	5a (20%), 5c (80%),
Puzzle	51 percent Slippery Bill-Puzzle recommended wilderness area	5a (7%), 5c (26%), 6a (9%), 6b (7%)
Sky West	0	5a (12%), 5c (49%), 6a (32%), 6b (6%)
Swan Face	76 percent Swan Front recommended wilderness area	2b (5%), 5a (4%), 5c (4%), 6a (4%), 6b (2%), 6c (5%)
Tuchuck	78 percent Tuchuck-Whale recommended wilderness area	2b (2%), 4a (6%), 5c (1%), 6a (14%),
Whale	72 percent Tuchuck-Whale recommended wilderness area	2b (7%), 5a (4%), 5c (4%), 6a (11%), 6b (3%)
Woodward	0	5c (42%), 6b (58%)

Eligible wild and scenic rivers

The land management plan includes 24 rivers identified as eligible for inclusion in the National Wild and Scenic Rivers System (36 CFR 219.7(2)(v) and (vi)). The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.) to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations.

Selected rivers in the United States are preserved for possessing outstandingly remarkable values, which include scenic, recreational, geologic, fish and wildlife, historic, cultural, and other similar values. Designated rivers or river segments are preserved in their free-flowing condition and are not dammed or otherwise impeded.

Eligible wild and scenic rivers (or river segments) are assigned one or more preliminary classifications: wild, scenic, or recreational. These preliminary classifications are based on the developmental character of the river on the date of designation and dictate the level of interim protection measures to apply. Wild rivers are the most remote and undeveloped, whereas recreational rivers often have many access points and nearby roads, railroads, and bridges and may have undergone some impoundment or diversion in the

past. The title of a river's classification is not necessarily related to the value that made it worthy of designation. That is, a river with a scenic classification does not necessarily have scenery as an outstandingly remarkable value.

I have determined that the following 24 rivers are free-flowing and have outstandingly remarkable values and are eligible wild and scenic rivers or river segments (see table 3).

Table 3. List of eligible wild and scenic rivers and their segments, preliminary classification, outstandingly remarkable values, and length

River	Segment	Preliminary Classification	Outstandingly Remarkable Values	Length (miles)
Aeneas Creek	Headwaters to Hungry Horse Reservoir	Scenic	History, prehistory, recreation, scenery	5
Big Salmon Creek	Lena Lake to South Fork of the Flathead River, including Big Salmon Lake	Wild	Recreation, geology, fish, prehistory	19
Clack Creek	Headwaters to Middle Fork of the Flathead River	Wild	Geology, scenery	8
Danaher Creek	Headwaters to Youngs Creek	Wild	Scenery, recreation, fish, wildlife, history, prehistory, botany, natural areas	23
Elk Creek	Headwaters to NFS boundary	Scenic	Fish	10
Gateway Creek	Headwaters to Strawberry Creek	Wild	Scenery, geology, history	5
Glacier Creek	Headwaters to outlet of Glacier Slough	Wild segment: within Mission Mountains Wilderness Scenic segment: wilderness boundary to outlet of Glacier Slough	Geology, wildlife, scenery	6
Graves Creek	Headwaters to Hungry Horse Reservoir	Wild segment: within Jewel Basin Scenic segment: from boundary of Jewel Basin Hiking Area to Hungry Horse Reservoir	Prehistory	10
Le Beau Creek	Headwaters to Le Beau research natural area boundary	Wild	Scenic, geological, natural area	4
Lion Creek	Source to Lion Creek trailhead	Scenic	Wildlife	11
Little Salmon Creek	Headwaters to South Fork of the Flathead River	Wild	Scenery, fish, prehistory	19
Logan Creek	From NFS Road 539 to Tally Lake	Recreational	Scenic, recreational	4
Schafer Creek	Headwaters to Middle Fork of the Flathead River	Wild	Prehistory, history	11

River	Segment	Preliminary Classification	Outstandingly Remarkable Values	Length (miles)
Spotted Bear River	Headwaters to South Fork of the Flathead River	Wild segment: headwaters to end of Blue Lake Recreational segment: Blue Lake to South Fork of the Flathead River	Recreation, wildlife, geology	35
Strawberry Creek	Headwaters to Middle Fork of the Flathead River	Wild	Fish	14
Lower Swan River	Swan River State Forest to Swan Lake ¹	Recreational	Wildlife	11
Upper Swan River	Crystal Lake to confluence with Lindbergh Lake	Wild	Recreation	2
Twin Creek (also known as Upper Twin Creek)	Nanny Creek to confluence with South Fork of the Flathead	Wild segment: From Nanny Creek to confluence with North Creek Recreational segment: North Creek to confluence with South Fork of the Flathead River	Geology, scenery	6
Whale Creek	Headwaters to NFS boundary	Scenic segment: Headwaters to confluence with Shorty Creek Recreational segment: Shorty Creek to NFS boundary	Wildlife, fish	21
White River	The entire White River	Wild	Geology, fish, history, prehistory, scenery	24
Nokio Creek	Nokio Creek along NFS Road #114 to confluence with Yakinikak Creek;	Scenic	Prehistory	3
Yakinikak Creek	Yakinikak Creek to confluence with Thoma Creek (stream becomes Trail Creek);	Scenic	Prehistory	8
Trail Creek	Trail Creek to NFS boundary	Scenic	Fish, prehistory, geology, wildlife	2
Youngs Creek	Headwaters to South Fork of the Flathead	Wild	Fish, recreation, prehistory, history, scenery	23
TOTAL	--	--	--	278

1. Plan direction for management area 2b is only for NFS lands. About 6 miles of this segment is on the Swan River State Forest (non-NFS lands), where plan direction is not applicable.

Special areas

The Forest has one existing designated special area, the Condon Creek Botanical Area. Thirteen special areas are recommended for designation in the land management plan. All special areas are recommended based on their special botanical features, and some areas have associated hydrologic or geological features. The boundaries of the fen special areas include a 300-foot buffer (riparian management zone) surrounding each fen.

After consideration of the value of the special features of each of the proposed areas listed in table 4, I have allocated these recommended special areas as management area 3b in the land management plan.

Table 4. Recommended special areas on the Flathead National Forest

Name	Special character and features	Acres ¹
The following 10 fens: Bent Flat, Gregg Creek, Lost Creek, Meadow Lake, Porcupine, Sanko Creek North, Sanko Creek South, Trail Creek, Trout Lake, Windfall	These fens, located across the Forest, have distinctive characteristics that warrant designation as special areas, including highly diverse flora and a number of rare plant species. They represent the different types of fens on the Forest and the unique features associated with this wetland type. Northern bog lemmings have been observed at some of these fens.	555 acres (range in size from 23 to 145 acres ¹)
Glacier Slough	One of the largest wetlands in the Swan Valley, with a diversity of wetland- and riparian-associated plant and animal species and adjacent forests of mixed conifer species.	1,690 ¹
Johnson Terrace	Includes mossy forb meadow on shallow residual soils over a Precambrian argillite bedrock dip slope that is inundated with water in the spring and dries out during the summer. Many diminutive plants are restricted to this type of ephemeral spring habitat. In addition to botanical features, contains geologic/topographic features that harbor a relatively rare diversity of plant species.	331
Fatty Creek Cedars	Moist, riparian-associated western red cedar forest type supporting stands dominated by very large, old cedar trees and associated unique assemblages of understory plants. Provides aesthetic values associated with "ancient" cedar groves. Groves such as this are relatively rare on the Forest due to the limited area with suitable site conditions for their development, past fire disturbance, and removal through previous logging or development activities.	261
Total acres		2,837

1. Acres include a 300-foot-wide buffer surrounding the fen or wetland feature.

Land management plan monitoring program

I recognize the importance of applying an adaptive management approach to land management plan implementation and to enable the tracking of our progress over time. Therefore, I have included a robust monitoring program in the land management plan (36 CFR 219.7 (c)(2)(x) and 219.12) that is designed to test our assumptions, track relevant conditions over time, measure our management effectiveness and evaluate the effects of our management practices. The plan monitoring program (chapter 5 of the land management plan) addresses what I believe to be the most critical components related to informed management of the Forest's resources within the financial and technical capability of the agency. Every monitoring question links to one or more desired conditions, objectives, standards, or guidelines. However, not every plan component has a corresponding monitoring question.

This monitoring program is not intended to depict all monitoring, inventorying, and data-gathering activities undertaken on the Forest, nor is it intended to limit monitoring to just the questions and indicators listed in chapter 5 of the land management plan. Consideration and coordination with broader-scale monitoring strategies adopted by the regional forester, multi-party monitoring collaboration, and cooperation with state and private forestry as well as research and development, as required by 36 CFR 219.12(a), will increase efficiencies and help track changing conditions beyond the Forest boundaries to improve the effectiveness of the plan monitoring program. In addition, project and activity monitoring may be used to gather information for the plan monitoring program if it will provide relevant information to inform adaptive management.

The monitoring program outlined in chapter 5 of the land management plan sets out the plan monitoring questions, plan components, and associated indicators. The monitoring program will be guided by a monitoring guide (to be developed) that will provide more detailed information on the monitoring questions, indicators, frequency and reliability, data sources and storage, and cost. For example, we anticipate that Forest Inventory and Analysis data will be used to monitor vegetation conditions and that data will be updated about every 10 years. However, data sources and frequency of updates may change, so the specifics will be included in a monitoring guide. It is important to note that not all monitoring questions are expected to be evaluated biennially.

Role of Science

The 2012 planning rule requires the responsible official to use the best available scientific information to inform the development of the land management plan, including the plan components, the monitoring program, and plan decisions. The foundation from which the plan components were developed for the land management plan was the expertise of the planning team members, who have a combined level of experience of well over 100 years working on the Forest. This interdisciplinary team of resource professionals compiled and evaluated the relevant information for the assessment of the Forest (USDA, 2014) and the best available scientific information and analyses contained therein. From this foundation, the interdisciplinary team used and updated the best available scientific information to develop the proposed action (May 2015), the alternatives, and the analysis and comparison of alternatives in the draft EIS (May 2016) and final EIS (December 2018). This information includes material that was readily available from public sources (libraries, research institutions, scientific journals, and online literature). It also includes information obtained from other sources, such as participation and attendance at scientific conferences, scientific knowledge from local experts, findings from ongoing research projects, workshops and collaborations, professional knowledge and experience, and information received during public participation periods. The interdisciplinary team utilized and updated a geographic information system database to evaluate complex spatial effects resulting from implementation of the alternatives (such as the recreation opportunity spectrum and effects to wildlife habitat by species). The interdisciplinary team used an optimization model to estimate the long-term flow of timber from the plan area. This model is widely used by private and State land managers. The model is widely accepted as an accurate way of modeling timber harvest schedules.

Resource specialists considered what is most accurate, reliable, and relevant in their use of the best available scientific information. The best available scientific information used to inform the land management plan is listed in the literature cited or references sections of the Flathead National Forest's assessment and the draft EIS as well as any additional information that was used, updated, and/or included in the final EIS or the planning record prior to the ROD. The final EIS provides documentation of how the best available scientific information was used to inform planning, the plan components, and other plan content, including the plan monitoring program (36 CFR 219.3). The References section of the final EIS includes the best available scientific information used to inform planning but may also include science that is discussed in order to address opposing science, as required by the NEPA. Additionally, the Forest may have incorporated some portions of the documents referenced, but not others, as indicated in individual sections of the final EIS.

Cooperation between county, State, and Federal agencies and tribes contributed to the best available scientific information. For example, the Forest coordinated with other national forest and regional specialists; Montana Fish, Wildlife and Parks; the Montana Natural Heritage Program, and the USFWS on lists of species known to occur on NFS lands managed by the Forest, species habitat associations, and development of the land management plan and its alternatives. Examples of other plans that were considered during the development of the land management plan include the Flathead and Missoula

County growth policies (FBOCC, 2012; MBCC, 2016), Montana's Statewide Wildlife Action Plan (MTFWP, 2015), and other state species management plans (e.g., Montana Fish, Wildlife and Parks elk, wolf, bald eagle, common loon, grizzly bear plans at, <http://fwp.mt.gov/doingBusiness/reference/managementPlans/wildlifeMgmt.html>); the Montana Department of Natural Resources and Conservation habitat conservation plan that addresses grizzly bear, Canada lynx, bull trout, westslope cutthroat trout, and riparian management areas (MTDNRC, 2010); and tribal plans related to wildlife management and climate change (CSKT, 2013).

The planning principles and guidance presented in the Aquatics section of the plan are based on the Integrated Scientific Assessment for Ecosystem Management (Quigley, Haynes, & Graham, 1996). The analyses developed as part of the Interior Columbia Basin Ecosystem Management Project and current best available science were used. The recovery plan for the coterminous U.S. population of bull trout (USFWS, 2015b), the Columbia Headwaters Recovery Unit Implementation Plan for bull trout (USFWS, 2015a), and the Conservation Strategy for Bull Trout on USFS Lands in Western Montana (USDA-USFWS, 2013) were instrumental in developing plan components and the conservation watershed network for native fish. Research by scientists at the USDA Forest Service Rocky Mountain and Pacific Northwest Research Stations on climate change and native fish contributed to the development of plan components.

Unpublished information provided by cooperative Forest Service monitoring efforts (e.g., forest carnivore monitoring by Swan Valley Connections) was reviewed, as was information provided by interest groups with local wildlife expertise (e.g., Flathead Audubon, American Bird Conservatory). Some members of the public (including wildlife interest groups from across the nation) submitted scientific information during scoping, and this information was also reviewed. In addition, the two wildlife biologists, the aquatics specialist, and the vegetation specialist on the planning team each have more than 20 years of experience working with the vegetation, wildlife, and aquatic species and habitats of the northern Rocky Mountains, including the Flathead National Forest. Their local knowledge and experience of the ecosystems in the plan area contributed to the best available scientific information.

Much of the recreation and roads information and plan direction is derived from the Forest Service infrastructure database (INFRA) as well as the National Visitor Use Monitoring surveys. The infrastructure database is a collection of web-based data entry forms, reporting tools, and mapping tools that enable national forests to manage and report the best available information about their inventory of constructed features (e.g., roads, trails). The National Visitor Use Monitoring data is an NFS-wide monitoring survey that collects forest-specific recreation use surveys every five years through the use of exit surveys.

Much of the information with respect to social and economic conditions and trends contained in the assessment and final EIS was taken from the Economic Profile System-Human Dimensions Toolkit (Headwaters Economics), developed in partnership with the Bureau of Land Management and the Forest Service. This database uses published statistics from Federal data sources, including but not limited to the U.S. Bureau of Economic Analysis, the U.S. Bureau of Labor Statistics, and the U.S. Census Bureau. Other significant sources of information used in developing plan direction in this area were publications on Montana's forest products industry developed by the University of Montana Bureau of Business and Economic Research; Northwest Economic Development District publications; data on Forest Service programs, salary and non-salary expenditures, and employment from Forest Service corporate databases; and the results of an analysis of the contribution of Forest programs and expenditures to jobs and labor income using Forest Service corporate data and data from IMPLAN (an economic impact model) for the year 2015. Public comments and expert input contributed to the development of plan components related to social and economic conditions.

In addition, the recreation/wilderness specialist, regional economist, and regional social scientist on the planning team collectively have 35 years of experience working with the social and economic resources in the USDA Forest Service Northern Region. Their knowledge and experience of the social and economic resources in the plan area contributed to the best available scientific information.

Following publication of the final EIS and draft ROD, some new scientific information was published related to grizzly bear, lynx, and wolverine (see the Endangered Species Act section of this ROD for descriptions of the information considered). I directed the planning team to review this information and inform me whether changes to the land management plan or additional analysis was needed. Their reviews are documented in the planning record (FNF, 2018; Kuennen, 2018a, 2018b). After considering their review, I have determined that changes in the programmatic land management plan are not needed.

For all these reasons, based on my review of the final EIS and the planning record, I have determined that the most accurate and reliable scientific information available that is relevant to the issues considered in this land management plan revision has been used to inform the planning process and has been applied to the issues considered in the revision, as required by 36 CFR 219.3.

Findings Required by Other Laws and Regulations

American Indian Religious Freedom Act

Agencies must make a good faith effort to understand how Indian religious practices may come into conflict with other Forest uses and consider any adverse impacts on these practices in their decisionmaking. The entire Forest is within aboriginal territory of the Confederated Salish and Kootenai Tribes.

No effects on American Indian social, economic, or subsistence rights are anticipated as a result of the land management plan revision. No matter which alternative is chosen for implementation, the Forest Service is required to consult with tribes when management activities may impact treaty rights and/or cultural sites and cultural use. Desired conditions for areas of tribal importance for all action alternatives of the land management plan are to (1) recognize and maintain culturally significant species and the habitat necessary to support healthy, sustainable, and harvestable plant and animal populations to ensure that reserved rights of tribes are not significantly impacted or diminished; and (2) recognize, ensure, and accommodate tribal member access to the Forest for the exercise of treaty rights and to provide opportunities for the practice of traditional, cultural, and religious activities such as plant gathering and ceremonial activities that are essential to sustaining their way of life, cultural integrity, social cohesion, and economic well-being.

Archaeological Resources Protection Act

The purpose of this act is to provide protection for archaeological resources found on public lands and Indian lands of the United States. The legislation provides civil and criminal penalties for those who remove or damage archaeological resources in violation of the prohibitions contained in the act. The act prohibits the removal of archaeological resources on public lands or Indian lands without first obtaining a permit from the affected Federal land manager or Indian tribe and requires Federal agencies to develop plans to survey lands under their management to determine the nature and extent of archaeological and cultural resources.

The land management plan is strategic and programmatic in nature, providing guidance and direction to future site-specific projects and activities. Compliance with Section 106 of the National Historic Preservation Act and 36 CFR 800 regulations requires assessments to establish the presence of historic

properties within the area of potential effect for any site-specific activities and also to meet the intent of this act. In addition, the Forest will continue to consult with tribes during site-specific management activities that may impact cultural sites and cultural use. The plan's desired conditions, objectives, and guidelines include provisions that take into consideration American Indian rights and interests and cultural resources. Therefore, the land management plan is fully compliant with this act.

Clean Air Act

At the scale of a programmatic plan such as this, the overall level of activities proposed under this decision is not anticipated to degrade air quality or violate State implementation plans. This finding is based on information presented in the final EIS. Conformity determinations and more detailed air quality impact analyses will be made at subsequent levels of planning and analysis when emissions can be more accurately quantified and reasonably forecasted and local impacts assessed.

Clean Water Act

Implementation of this land management plan is expected to maintain and improve water quality and satisfy all State water quality requirements. I base this finding on the extensive standards and guidelines contained in the plan, the application of State-approved "best management practices" specifically designed to protect water quality, and the discussion of water quality and beneficial uses contained in chapter 3 of the final EIS. Examples include the management direction protecting riparian management zones and the requirements for road design. Additionally, project-level analysis for subsequent activities under the plan will be required to demonstrate compliance with Clean Water Act and State water quality standards.

Endangered Species Act

The purpose of the Endangered Species Act is to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved and to provide for the conservation of such endangered species and threatened species. Section 7(a)(1) of the act requires Federal agencies to carry out programs for the conservation of listed species. In addition, the Endangered Species Act requires Federal agencies to ensure that any agency action does not jeopardize the continued existence of the species (Endangered Species Act, section 7(a)(2)). The Endangered Species Act also requires the USFWS and the Forest Service, respectively, to base their biological opinion and subsequent agency action on the use of the best scientific and commercially available data (16 U.S.C. 1536(a)(2)).

In recognition of the complexity of consulting on the Flathead land management plan concurrent with amendments of the Helena, Lewis and Clark, Kootenai, and Lolo land management plans, we developed a consultation agreement with USFWS to guide our consultation throughout the planning process. The Forest obtained a list of proposed, threatened, endangered, and candidate species identified by the USFWS on November 17, 2017 (USFWS, 2017c). Before signing this ROD, I updated consultation on the Flathead National Forest land management plan (planning record exhibits #00993 and #00994) and verified that there had been no new listings or changes in status of threatened or endangered species or designated critical habitat subsequent to completion of our Section 7 consultation (December 2018). The Forest prepared a biological assessment for all federally listed and proposed terrestrial, aquatic, and plant species and their designated critical habitats (Kuennen et al., 2017).

The biological assessment concluded that implementation of the land management plan will have *no effect* on the meltwater lednian stonefly or on potential habitat for Spalding's catchfly; *may affect, but is not likely to adversely affect* water howellia; *may affect, and is likely to adversely affect* Canada lynx, grizzly bear, and bull trout. The biological assessment determined that implementation of the land management plan may *adversely affect* designated critical habitat for Canada lynx and bull trout. The

biological assessment outlines the specific reasons why implementation of the land management plan may have adverse effects to individuals of these species or designated critical habitat but still result in overall net benefits. The biological assessment also determined that the land management plan *may affect, but is not likely to jeopardize* the North American wolverine (species proposed for listing).

No consultation with USFWS was needed for the meltwater lednian stonefly or Spalding's catchfly. USFWS concurred with the *may affect, but is not likely to adversely affect* determination for water howellia. The conservation strategy for water howellia (USDA, 1997) will be retained in the land management plan, and it includes direction to maintain both occupied habitat and suitable but unoccupied pond habitats for the species. USFWS also concurred with the *may affect, not likely to jeopardize* determination for the wolverine.

The Forest Service received a biological opinion from USFWS for the grizzly bear, Canada lynx, bull trout, Canada lynx critical habitat, and bull trout critical habitat (USFWS, 2017a). The biological opinion concluded that although implementation of the land management plan may have adverse effects on individual members of a species, it is not likely to jeopardize the continued existence of Canada lynx, grizzly bear, or bull trout and is not likely to destroy or adversely modify Canada lynx or bull trout critical habitat.

I find this decision to be in compliance with the requirements of the Endangered Species Act. In the following sections, we provide additional detail regarding the analysis of effects, requirements of the incidental take statement, and conservation recommendations in the biological opinion for each of these species.

Grizzly bear

One of the pieces of scientific information we relied heavily on to develop our land management plan was the draft Conservation Strategy (USFWS, 2013). Since 2009, I have participated in the process of developing the NCDE Grizzly Bear Conservation Strategy, an effort by multiple agencies and the Tribes to guide coordinated, effective management of the grizzly bear in the future. I considered the best available scientific information on the grizzly bear and other resources to develop alternatives to the proposed action and to make my decision to select alternative B modified. Subsequent to the release of the final EIS and draft ROD in December 2017, the grizzly bear recovery plan was supplemented in May 2018 with habitat based recovery criteria for the NCDE (USFWS, 2018), and the NCDE Conservation Strategy was finalized and made available in July of 2018 (IGBC, 2018)(NCDE Subcommittee 2018). The conservation strategy provides the interagency management strategy to ensure that the recovery of the NCDE grizzly bear population is sustained post-delisting. As a signatory to the final NCDE conservation strategy, the Forest Service is committed to continued conservation of the grizzly bear.

I reviewed new science, the habitat based recovery criteria, and the 2018 NCDE Grizzly Bear Conservation Strategy and determined that no changes to the land management plan components are necessary to provide for conservation of the grizzly bear. I also concluded that these documents do not provide significant new information that was not previously considered in the development of alternatives and analysis of effects in the final EIS (FNF, 2018; Warren & Kuennen, 2018a, 2018b).

As presented in the final EIS and biological assessment, the best available scientific information shows that the NCDE grizzly bear population has substantially increased in numbers and geographic distribution and has been on a stable to increasing trend. My decision to select alternative B modified is fully consistent with the NCDE Conservation Strategy that was specifically developed to maintain a recovered grizzly bear population. Alternative B modified is designed to maintain on-the-ground habitat conditions that supported a stable to increasing grizzly bear population while also allowing resource management

activities to continue at about the same levels that occurred during the same time period. It includes plan components for the original recovery zone (now designated as the primary conservation area), but also includes plan components for an additional area of the Forest designated as zone 1, including the Salish Demographic Connectivity Area. As suggested by the public, I considered the effects of expanding protections for grizzly bear habitat and decided to incorporate a few plan components from alternative C into alternative B modified and to extend some land management plan components beyond the primary conservation area to zone 1 and/or the demographic connectivity area. Alternative B modified provides the necessary habitat protections to contribute to the conservation and recovery of the NCDE population and addresses the issue of adequate regulatory mechanisms to protect the grizzly bear population.

In the primary conservation area, the land management plan maintains or improves the on-the-ground habitat conditions relative to motorized access, vegetation management, livestock grazing, and energy and minerals development that have supported the improved status of grizzly bears in the NCDE. Developed recreation sites will be allowed to increase at a rate similar to what was allowed during the period when the grizzly bear population was stable to increasing, and efforts to prevent grizzly bear-human conflicts will be continued. In the primary conservation area, a recreation standard specifies that there shall be no net increase in developed recreation sites designed and managed for overnight use. An infrastructure standard specifies that there shall be no net decrease to the baseline for secure core and no net increase to the baseline open motorized route density or total motorized route density on National Forest System lands during the non-denning season, based on a moving window analysis method. The land management plan does not require new closures of motorized routes that are currently open to public use. Given the improved condition of NCDE grizzly bear population and its habitat, it will not be necessary to further reduce public motorized access by about 518 miles, as would be needed to meet objectives of amendment 19 of the 1986 land management plan. Although I acknowledge that the direction from Amendment 19 of the 1986 land management plan has been beneficial, the overall ecological conditions (both habitat and species populations) have improved to a point that further programmatic access restrictions to improve grizzly bear habitat are not necessary. There may be other site-specific resource concerns that warrant access restrictions throughout the life of this plan, but I don't anticipate significant new access restrictions above the anticipated 30-60 miles identified for multiple resource benefits as an objective in the land management plan. Temporary increases in motorized access for projects will be allowed, but will be limited by multiple plan components. For example, timber harvest is not allowable in wilderness or recommended wilderness management areas, so these areas would provide large areas of high quality habitat security. Outside these management areas, temporary increases due to projects are limited in duration and extent by plan standards as well as terms and conditions required by the USFWS (see section on Endangered Species Act).

In zone 1, the land management plan provides for demographic connectivity to the Cabinet-Yaak ecosystem through a combination of management areas, standards, guidelines, and desired conditions. Connectivity is provided by the management area 3 designation for the LeBeau Research Natural Area, where timber harvest and infrastructure development are not allowable. This large habitat block is connected to a block of management area 6b, connecting to the adjacent Kootenai National Forest. I chose management area 6b rather than 6c for this area in recognition of the importance of providing grizzly bear habitat connectivity in the Salish demographic connectivity area, rather than maximum timber production. Timber harvest could occur in this area to meet desired grizzly bear habitat conditions, but the pace and scale may be reduced to maintain more cover and lower road density at a given point in time. Well-distributed riparian management zones and their associated plan components would also provide for connectivity.

Alternative B modified includes a standard for no net increase in the density of motorized routes in the Salish Demographic Connectivity area, based upon new science by Boulanger and Stenhouse (2014). I

chose this published science as being most reliable, accurate and relevant to zone 1 because these authors studied grizzly bears in an environment that is similar to that found in zone 1, in that their study area had many open roads and extensive logging.

In consideration of the expressed public desire for more motorized recreation opportunities and per the multiple use mission of the Forest Service, alternative B modified would provide the forest-wide opportunity for wheeled motorized vehicle use (suitable on designated roads and trails) on a little more than 1,427 miles of NFS roads and 226 miles of NFS trails for a total of 1,653 miles. The land management plan would allow some additional motorized trail access to occur in land management plan management area 7, in grizzly bear management zone 1, outside of the Salish demographic connectivity area. There have been increases in motorized trail access in this area during the time period when the NCDE grizzly bear population has been growing and expanding in distribution.

The best available scientific information shows that the NCDE grizzly bear population has the estimated numbers and distribution of reproductive individuals to be self-sustaining. Since the grizzly bear was listed, the NCDE population has substantially increased in size to more than double the recovery plan goal of 391 bears. Costello et al. (2016) evaluated occupancy of the 23 bear management units in the NCDE by females with offspring during 2004 to 2014. Using the six year running tally as set forth in the recovery plan USFWS (1993), the authors documented full occupancy of the recovery zone starting in 2009 and continuing through 2014 (Costello et al., 2016). Proctor et al. (2012) showed that the U.S. population is well connected to the grizzly bear population across the international boundary in Alberta and British Columbia.

After reviewing the current status of the grizzly bear, the environmental baseline for the action area (NFS lands on the Flathead National Forest), the effects of land management plan components (e.g., management area allocation, suitability, desired condition, standards, and guidelines), and cumulative effects, the USFWS concluded that the effects of the proposed Flathead's land management plan are not likely to jeopardize the continued existence of the grizzly bear. No critical habitat has been designated for this species, and therefore none will be affected. Based on the best available scientific information reviewed in the consultation, the USFWS determined that adverse effects on individual grizzly bears as a result of the land management plan will not negatively impact the recovery of the NCDE grizzly bear population. Further, the USFWS stated their expectation that direction in the land management plan will result in conditions that support grizzly bear use of NFS lands in the NCDE. Implementation of the land management plan may result in adverse effects on some individual grizzly bears using the action area now and into the future. However, considering the large size of the NCDE recovery zone, the favorable land management direction within the recovery zone/primary conservation area, and the robust status of the NCDE grizzly bear population, adverse effects on grizzly bears as a result of implementing the land management plan would not have negative effects on the status of the NCDE grizzly bear population. Therefore, the USFWS concluded that the land management plan is not reasonably expected to reduce appreciably the likelihood of both the survival and recovery of NCDE grizzly bears (USFWS, 2017a, pp. III-78-83).

The biological opinion considered the potential for incidental take to occur as a result of Forest management, specifically resulting from access management and motorized over-snow vehicle use. To be exempt from ESA prohibitions of take, the Forest must be in compliance with the reasonable and prudent measure and terms and conditions of the incidental take statement:

Reasonable and prudent measure: Minimize or reduce the potential for mortality and displacement of grizzly bears due to the proposed action.

Nondiscretionary terms and conditions:

1. The Forest Service shall comply with standards FW-STD-IFS-01, FW-STD-IFS-02, FW-STD-IFS-03, FW-STD-IFS-04, and FW-STD-REC-05 in the Flathead land management plan.
2. The Forest Service shall comply with guidelines FW-GDL-IFS-01 and FW-GDL-IFS-02 in the Flathead land management plan. If projects will be unable to comply with the above guidelines, the Forest Service shall contact the USFWS immediately to determine further consultation needs.
3. Concurrent, temporary increases in open motorized route density or total motorized route density, or concurrent temporary decreases in secure core for new projects (as described in the glossary in appendix 3 of the biological opinion) on NFS lands shall not occur in more than three adjacent bear management subunits on the Flathead National Forest.
4. The Forest Service shall continue to implement food/attractant storage and handling programs in the action area. This includes ensuring that all Forest Service employees and contractors adhere to appropriate protocols and providing educational material to the public on measures to avoid conflicts and/or food conditioning of grizzly bears.

Implementation of the land management plan will comply with the above requirements of the incidental take statement. We also will adhere to the monitoring and reporting requirements referenced in the biological opinion. As required by the ESA, if the level of take exempted under the biological opinion for the land management plan would be exceeded, reinitiation of consultation or project-specific consultation would be required (as appropriate).

Sections 7(a)(1) of the Endangered Species Act directs federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. During the course of this consultation, the USFWS noted several elements of the Flathead National Forest's land management plan that will contribute to the conservation of endangered, threatened, proposed, and candidate species. The land management plan will provide habitat conditions on the Flathead National Forest that supported a stable to increasing population of grizzly bears in the NCDE. The land management plan will be beneficial to grizzly bears by requiring food/attractant storage order(s) on NFS lands, limiting motorized access, limiting new developed recreation sites, limiting new grazing allotments, and requiring a "no surface occupancy" stipulation for new oil and gas leases in the recovery zone/primary conservation area. These and other plan components for minerals, recreation, livestock grazing, lands, and vegetation management activities will ensure that grizzly bear habitat needs are provided for in future site-specific projects. Additional plan components for zone 1 will be beneficial to the NCDE grizzly bear population by supporting grizzly bear occupancy in areas beyond the original recovery zone/primary conservation area. The ongoing efforts by the Forest Service to cooperate with other Federal, State, local, and tribal agencies and private landowners in the NCDE also are important in supporting coordinated grizzly bear conservation efforts.

The biological opinion identifies the following conservation recommendations that also will support the recovery of listed species. These conservation recommendations are discretionary. I will take these into consideration as management actions are planned and conducted:

1. Maintain and/or install grizzly bear informational signs at major access points that provide the public with the following information: potential grizzly bear presence; proper sanitation/food storage techniques; and distinguishing characteristics between grizzly bears and black bears.
2. Participate in ongoing interagency efforts to identify, map, and manage linkage areas that may be important in providing landscape connectivity within and between grizzly bear ecosystems across all land ownerships for grizzly bears.

3. Plan recreational development and recreational/operation uses in a manner that facilitates grizzly bear movement and maintains habitat effectiveness.
4. Plan and manage developments on NFS lands in a manner that allows for grizzly bear use of key habitats in the primary conservation area and zone 1.
5. In cooperation with other agencies, identify areas where grizzly bears concentrate during specific time periods to take advantage of concentrated and/or diverse food sources. Where grizzly bear use is known or likely to occur and where practicable, plan activities in a fashion that minimizes displacement of grizzly bears.

Canada lynx and their critical habitat

The ROD for the Northern Rockies Lynx Management Direction (USDA, 2007) concluded that under this management direction, the national forests would provide habitat to maintain a viable population of Canada lynx in the northern Rockies over the long term by maintaining the current distribution of occupied lynx habitat and maintaining or enhancing the quality of that habitat. In lynx habitat, the land management plan incorporates Canada lynx plan components from the NRLMD (appendix A), with two Forest-specific modifications to; 1) restore whitebark pine, a candidate species, and 2) to shift areas suitable for motorized over-snow use, with no net increase in the miles or percentage of lynx habitat where this activity is suitable. Additionally, plan components are added for critical habitat and to incorporate vegetation desired conditions for reproductive success of female lynx. In addition to incorporating standards for lynx habitat connectivity from the NRLMD (plan appendix A), new Forest-specific plan components (including management areas, geographic area desired conditions, and guidelines for riparian management zones and infrastructure) incorporate additional scientific findings for Canada lynx habitat connectivity. A riparian management zone guideline limits distance to cover based upon the findings in Squires and others (2010) while infrastructure desired conditions and guidelines address roads and highways.

I considered the best available scientific information on the Canada lynx and other resources to develop alternatives to the proposed action and to make my decision to select alternative B modified. Subsequent to the release of the final EIS and draft ROD in December 2017, new science pertaining to Canada lynx and their habitat was published. I reviewed new science and determined that no changes to the land management plan components are necessary to provide for conservation of the Canada lynx. I also concluded that these documents do not provide significant new information that was not previously considered in the development of alternatives and analysis of effects in the final EIS (Kuennen, 2018a).

The decision applies to lynx habitat on NFS land presently occupied by Canada lynx, as defined by the amended Lynx Conservation Agreement between the Forest Service and the USFWS (USFWS, 2006). The Forest is listed as occupied lynx habitat. The population of Canada lynx on the Forest is unknown, but the lynx is known to be distributed throughout portions of the Flathead National Forest included in the study area delineated by Squires and others in 2013 (Squires et al., 2013). During 2010 to 2015, 15 individual adult or subadult lynx were captured and fitted with radiotelemetry collars on the Forest. Noninvasive sampling techniques have also been used to obtain DNA, resulting in additional lynx detections across the Forest (see section 3.7.5 in the final EIS, subsection “Canada lynx,” for more details). The amended Lynx Conservation Agreement explains that as new criteria for mapping lynx habitat become available, lynx habitat maps may be refined. Site-specific application of mapping criteria may also lead to changes in what is mapped as lynx habitat. As a result, the areas subject to the agreement may change.

With this decision, the Forest is updating its lynx habitat map based upon the best available scientific information. The updated map of lynx habitat includes lands capable of providing the physical and

biological features to support the conservation and recovery of Canada lynx, consistent with the amended Lynx Conservation Agreement (USFWS, 2006) and the Canada Lynx Conservation Assessment and Strategy (ILBT, 2013). The Forest has fully coordinated these updates with the USFWS and with the USDA Forest Service Northern Region and has published its lynx habitat map in planning documents available for public comment. The Forest Service is clarifying in this decision that NRLMD standards VEG S1, S2, S5, and S6 do not apply in portions of the Forest in the warm-dry potential vegetation type nor in the dry ponderosa pine/Douglas-fir portion of the warm-moist potential vegetation type because these vegetation types are not defined as lynx habitat.

The Forest consulted with the USFWS on the land management plan. After reviewing the current status of the Canada lynx, the environmental baseline for the action area (NFS lands on the Flathead National Forest), the effects of the action, and the cumulative effects, the USFWS concluded that the effects of the proposed Flathead National Forest land management plan are *not likely to jeopardize* the continued existence of the Canada lynx. Their conclusion is based on the literature and information referenced in the biological opinion (USFWS, 2017a), meetings and discussions with the Forest, discussions with Canada lynx experts, the information in the biological assessment (Kuennen et al., 2017), and information in USFWS files. The USFWS determined that although adverse effects are likely to some individual lynx, the proposed action is expected to support and sustain lynx populations within the Flathead National Forest. Therefore, the USFWS concluded that the proposed action is not reasonably expected to reduce appreciably the likelihood of both the survival and recovery of lynx populations in the wild (USFWS, 2017a, pp. IV-80-83).

After reviewing the current status of designated lynx critical habitat, the environmental baseline for the action area, the effects of the action, and the cumulative effects, the USFWS concluded that the effects of the land management plan are *not likely* to result in the destruction or adverse modification of designated Canada lynx critical habitat. The USFWS (2017a) determined that the land management plan will not preclude continued adequate amounts of snowshoe hare habitat needed to sustain lynx in the lynx analysis units within the action area, and thus critical habitat in the lynx analysis units would remain functional. When added to the status of the critical habitat units, the effects of the land management plan are such that lynx critical habitat unit 3 will continue to serve its intended conservation role for lynx, and the physical or biological features, including the primary constituent element components essential to the conservation of lynx, will not be altered to a point that precludes or significantly delays development of these features. The USFWS concluded that the adverse effects of the land management plan on primary constituent element 1a are limited in severity and in scale to the extent that critical habitat would continue to produce adequate densities of snowshoe hares and adequate levels of cover to support persistent lynx populations across critical habitat unit 3. The critical habitat units would retain their current ability for the primary constituent element to be functionally established. Thus, the USFWS concluded that although the Flathead National Forest land management plan may result in some level of adverse effects to lynx critical habitat, the level of adverse effects are not reasonably expected to alter the physical and biological features to an extent that appreciably reduces the conservation value of critical habitat for the lynx distinct population segment (USFWS, 2017a, p. IV-84). Therefore, implementation of the land management plan is not likely to result in the destruction or adverse modification of designated Canada lynx critical habitat.

The biological opinion considered the effects to Canada lynx and their critical habitat from implementation of the land management plan as guided by the plan components (goals, objectives, desired condition, standards, and guidelines). The land management plan includes specific elements for the conservation of lynx and lynx habitat but does not authorize specific actions. The land management plan contains sufficient specificity through its suite of elements to permit an adequate analysis of the effects of projects and activities on lynx. As a result, the USFWS was able to make a determination that the extent of adverse effects on lynx as a result of the land management plan does not rise to levels that

are likely to jeopardize lynx. However, this biological opinion does not provide a detailed analysis for effects of specific projects. This consultation represents the first tier of a tiered consultation framework, with each subsequent project that may affect lynx or lynx critical habitat as implemented under the land management plan being the second tier of consultation. These second-tier consultations would reference back to this biological opinion to ensure that the effects of specific projects under consultation are commensurate with the effects anticipated in this biological opinion. With each subsequent second-tier consultation, the cumulative total of acres treated under the exemptions and/or exceptions to the vegetation standards would be tracked (USFWS, 2017a, p. IV-88).

In the biological assessment (Kuennen et al., 2017), the Forest provided estimates of the number of acres that could be treated through (a) fuels treatment projects within the wildland-urban interface conducted under the exemptions from vegetation standards VEG S1, S2, S5, and S6 and (b) precommercial thinning and non-commercial felling projects for “resource benefit” allowed under exceptions to VEG S5 and S6 (detailed in the biological opinion). The land management plan includes the Northern Rockies Lynx Management Direction (see appendix A), using the 2007 projections for acres of wildland-urban interface to be treated for fuel reduction under exemptions. One Forest-specific modification is included and additional acres for precommercial thinning and noncommercial felling for other resource benefits under the vegetation standard exceptions (see land management plan appendix A). The USFWS anticipates that take associated with implementation of the land management plan would occur through vegetation management when projects are conducted in lynx habitat under the exemptions and exceptions to the land management plan vegetation standards VEG S1, S2, S5, and S6, as described and analyzed in the biological opinion. Projects conducted under the exceptions and exemptions may reduce the quality of habitat that produces snowshoe hares. The USFWS determined that many, but likely not all, of the projects conducted under the exemptions or exceptions could significantly reduce the capacity of affected snowshoe hare habitat to produce hares and so could result in take (USFWS, 2017a, pp. IV-87-91). The USFWS biological opinion anticipated the amounts of take (beginning on the date of the signed ROD for the land management plan to 15 years later or during the life of the land management plan, whichever comes first): (1) up to 103,800 acres minus treatment of 10,734 acres the Forest consulted on under wildland-urban interface exemptions since 2007 and (2) up to 15,460 acres minus treatment of 1,338 acres the Forest consulted on since 2007 under the exceptions to VEG S5 and S6 for other resource benefits.

To be exempt from the ESA prohibitions against take, the Forest must be in compliance with the reasonable and prudent measure and the incidental take statement contained in the USFWS biological opinion.

Reasonable and prudent measures:

1. The Forest shall minimize harm of lynx from fuels management by ensuring that the acres impacted are not concentrated in several adjacent lynx analysis units.
2. The Forest shall minimize harm of lynx from precommercial thinning and other vegetation management projects by ensuring that female lynx home ranges, as represented by lynx analysis units, either retain sufficient foraging habitat (when sufficient foraging habitat already exists in a lynx analysis unit) or do not substantially reduce foraging habitat (when sufficient foraging habitat does not already exist in a lynx analysis unit).
3. The Forest shall monitor and report the progress of the action and the impact on the species.

The following terms and conditions implement reasonable and prudent measure 1. The Forest Service shall ensure that new or future projects conducted under the exemptions from standards VEG S1, S2, S5, and S6 on the Flathead National Forest:

1. Do not occur in greater than 93,723 acres in the wildland-urban interface.
2. Do not result in more than three adjacent lynx analysis units that do not meet the standard VEG S1 of no more than 30 percent of a lynx analysis unit that is not yet snowshoe hare habitat.
3. Projects allowed per the exemptions or exceptions to VEG S5 and S6 shall not occur in any lynx analysis unit exceeding VEG S1, except for protection of structures.

The following terms and conditions implement reasonable and prudent measure 2. The Forest Service shall ensure that vegetation management projects conducted under exceptions to VEG S5 and S6 on the Flathead National Forest adhere to the following:

4. Timber management projects (as defined in appendix 5 of the biological opinion) shall not regenerate more than 15 percent of lynx habitat on Forest lands within a lynx analysis unit in a 10-year period.
5. Do not occur in greater than 15,460 acres.

The following terms and conditions implement reasonable and prudent measure #3:

6. In support of the monitoring and reporting requirements of the NRLMD, the Flathead National Forest shall provide to the USFWS and the USDA Forest Service Northern Region (Region 1) Office in Missoula summaries of the reporting requirements listed below. The summaries shall be submitted to the USFWS Montana Ecological Services Office in Helena, Montana, by April 1 of each year or other date through mutual agreement. The summaries shall document the following information related to fuel treatment and vegetation management projects occurring in lynx habitat:
 - a. Individual fuels treatment and vegetation management projects conducted in lynx habitat under the exemptions and exceptions to the vegetation standards VEG S1, S2, S5, and S6 may reduce the quality or quantity of snowshoe hare habitat. Some projects are likely to result in detectable and measurable effects to lynx (the USFWS biological opinion's analysis found that this may rise to the level of take), while other projects will not result in a detectable, measurable effect to lynx (i.e., may affect, but not likely to adversely affect). The acreages of all projects will be tracked and aggregated to ensure that over the life of the land management plan, the number of acres impacted does not exceed the acres projected to be treated and the effects analyzed in the biological opinion. This approach to tracking and monitoring ensures that the proposed action is implemented as proposed and is consistent with the USFWS analysis. In addition, given the long time span of the proposed action, this process provides information that can help determine whether consultation reinitiation ever becomes necessary.

If the level of take exempted under the biological opinion for the land management plan would be exceeded, reinitiation of consultation or project-specific consultation would be required (as appropriate).

Sections 7(a)(1) of the Endangered Species Act directs Federal agencies to use their authorities to further the purposes of the act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The recommendations provided here relate only to the land management plan and do not necessarily represent complete fulfillment of the agency's section 7(a)(1) responsibilities. The biological opinion identifies the following conservation recommendations that, in addition to the land

management plan and other ongoing conservation actions, will support the recovery of listed species. The conservation recommendations are:

1. In areas of intermingled land ownership, work with landowners to pursue conservation easements, habitat conservation plans, land exchanges, or other solutions to reduce the potential of adverse impacts on lynx and lynx habitat.
2. When highway or forest highway construction or reconstruction is proposed in linkage areas, identify potential highway crossings.
3. Participate in interagency efforts to understand the effects of climate change, wildlife, and post-fire treatments in lynx habitat.
4. The USFWS commends the Forest Service for initiating and implementing important efforts to increase our understanding of lynx and lynx habitat through completion of the Science Report, lynx habitat mapping, and linkage zone identification and for assuming leadership roles on both the Lynx Biology Team and the Lynx Steering Committee. The USFWS recommends that the Forest Service continue to be a leader in these arenas, in coordination/cooperation with other Federal, State, or private entities.

Bull trout and bull trout critical habitat

After reviewing the current status of bull trout, the environmental baseline (including effects of Federal actions covered by previous consultations) for the action area, effects of the action, and cumulative effects, the USFWS biological opinion (USFWS, 2017a) concluded that the effects of implementing the land management plan is *not likely to jeopardize* the continued existence of the bull trout and is *not likely to destroy or adversely modify* its critical habitat. This conclusion is based on the magnitude of the project effects to reproduction, distribution, and abundance in relation to the listed population.

Reducing the effects of land management activities on bull trout and their habitats is controlled through the management direction provided for in the land management plan. Baseline conditions are expected to improve where active watershed restoration is implemented in combination with conservation of those watersheds currently in proper functioning condition. Adverse effects are expected to occur in all four core areas as a result of forest management activities that would be reasonably expected to be implemented over the life of the land management plan. Effects to bull trout and their habitat would primarily be attributable to short-term sediment generation through management activities authorized by the land management plan. The level of effects is not expected to result in discernible negative impacts to core area populations. As a result, the USFWS concluded that implementation of the land management plan is not likely to appreciably reduce the reproduction, numbers, or distribution of bull trout at the scale of any of the affected core areas and, by extension, in the Flathead Lake Geographic Region and the Columbia Headwaters Recovery Unit. Therefore, the USFWS concluded that implementation of the land management plan will not appreciably reduce either the survival and recovery and would not jeopardize bull trout at the rangewide scale of the listed entity, the coterminous population of the United States (USFWS, 2017a, pp. II-68-69).

After reviewing the current status of the four critical habitat subunits in the action area (Flathead Lake North Fork Flathead River, Flathead Lake Middle Fork Flathead River, Flathead Lake South Fork Flathead River, and Swan River and Lakes) and their relationships to the bull trout core area, the environmental baseline for the action area, the effects of the land management plan, and the cumulative effects, the USFWS concludes that although these effects will temporarily lower the function of spawning and rearing habitat in the action area due to some level of unavoidable sediment loading, these effects are unlikely to significantly change the functional capacity of the critical habitat subunits described above.

On that basis, it is the USFWS's biological opinion that implementation of the Flathead National Forest's land management plan, is not likely to destroy or adversely modify bull trout critical habitat (USFWS, 2017a, p. II-70).

The biological opinion identifies management direction that allows for future activities that may adversely affect bull trout and designated bull trout critical habitat, including vegetation management; road construction, use, and maintenance; unplanned and prescribed fires; grazing; recreation; and mining. The land management plan reduces the potential for incidental take to occur as a result of these actions. The mere potential for future take from these actions is not a legitimate basis for providing an exemption for take. Subsequent consultation, as appropriate, on the specific actions developed pursuant to the land management plan will serve as the basis for determining if an exemption from the section 9 take prohibitions is warranted. If so, the USFWS will provide reasonable and prudent measures and terms and conditions, as appropriate, to minimize the impacts of the take on bull trout in accordance with 50 CFR 402.14(i).

The biological opinion for bull trout and bull trout critical habitat does not contain an incidental take statement specific to the land management plan. However, in consultation with the US Fish and Wildlife Service, the land management plan incorporates culvert monitoring from terms and conditions of past project incidental take statements. As stated in the biological opinion (USFWS, 2017a, pp. 71-72), the USFWS hereby revises the reporting requirements on those and future affected projects in the following manner.

The USFWS agrees that the Culvert Monitoring Plan Version 1.0 will replace the culvert monitoring requirements contained in the terms and conditions issued in the following past biological opinions:

- Amendment 19 Revised Implementation (November 2010)
- Robert Wedge Post-Fire Project (November 2004)
- West Side Reservoir Post-Fire Project (November 2002)
- Moose Post-Fire Project (November 2002)
- Spotted Beetle Project (March 2002)

The specific term and condition in each biological opinion is presented in the Culvert Monitoring Plan (see Kuennen et al., 2017, table 1 in appendix D). From this date forward, the USFWS will consider the terms and conditions presented in table 1 of the culvert monitoring plan as being amended such that adherence to the Culvert Monitoring Plan Version 1.0 (and any subsequent version agreed to by the USFWS) will function in lieu of existing culvert monitoring requirements. The USFWS stated their belief that a more comprehensive, forestwide culvert monitoring and remediation effort will benefit native fish and wildlife species. The USFWS approval of the Culvert Monitoring Plan and amendment of existing terms and conditions is based on the following:

- Current monitoring requirements are spread throughout the Forest in a handful of bull trout watersheds. The Culvert Monitoring Plan will monitor culvert conditions in *all* bull trout watersheds across the Forest.
- The Culvert Monitoring Plan includes remedial actions that shall be taken by the Forest if a failing culvert is found. Remedial actions will be developed in coordination with the USFWS.
- The Culvert Monitoring Plan includes an adaptive management strategy. This strategy will optimize the monitoring effort by allowing changes to be made based on past years' data, changes in

watershed conditions, or major climatic events (e.g., floods, fire). The adaptive management process will be carried out in coordination with the USFWS.

- Annual reporting requirements are included in the Culvert Monitoring Plan. These requirements include an annual meeting between the USFWS and the Forest, which will ensure an annual assessment of the effectiveness of implementation.
- As part of the adaptive management strategy, the Culvert Monitoring Plan indicates that if at any time implementation cannot be effectively achieved, the Forest will revert back to the original term and condition monitoring requirements (as presented in Kuennen et al., 2017, table 1 of appendix D).

This systematic process will ensure that road segments behind gates and barriers are inspected for prism and stream crossing problems and thus prioritized for remedy and/or restoration in a timely fashion.

Additionally, section 7(a)(1) of the Endangered Species Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat to help implement recovery plans or to develop information.

During the course of consultation on the land management plan, the USFWS noted several elements that will contribute to the conservation of endangered, threatened, proposed, and candidate species. These elements are:

- The land management plan includes aquatic and riparian management plan components to maintain or restore watershed conditions.
- Implementation of the land management plan will also include the establishment of a conservation watershed network. This process seeks watersheds identified as native fish strongholds with appropriately functioning aquatic habitats. Conservation watershed network watersheds are 10th to 12th code hydrological unit codes intended to protect stronghold populations of native salmonids and complement restoration efforts. Through land management plan direction, conservation watershed network watersheds will maintain high-quality habitat and functionally intact ecosystems that are contributing to and enhancing the conservation and recovery of bull trout.
- The ongoing efforts by the Forest Service to cooperate with other Federal, State, local, and tribal agencies and private landowners in the action area are important in supporting coordinated bull trout conservation efforts.

The biological opinion on the land management plan identifies the following conservation recommendations that, in addition to land management plan and other ongoing conservation actions, will support the recovery of listed species (USFWS, 2017a, pp. II-72-74). These conservation recommendations are discretionary. I will take these into consideration as management actions are planned and conducted:

1. Section 2672.2 of the Forest Service Manual states: “The Forest Service must manage habitats at levels that accomplish the recovery of federally listed species so that protective measures under the [Endangered Species] Act are no longer necessary.” The Bull Trout Conservation Strategy (USDA-USFWS, 2013) was intended, in part, to “help direct resources to the most important opportunities, where FS management has the potential to increase habitat quality and connectivity.” The Bull Trout Conservation Strategy should be considered for management opportunities to improve habitat conditions that are conducive to the recovery of bull trout.

2. When planning future projects at the watershed scale, consider actions designed to improve the functional condition of habitat baseline conditions (e.g., FUR to FAR) for bull trout.
3. Work cooperatively with other State and Federal agencies to address the potential impacts of non-native fish species (e.g., lake trout) in the Swan Lake and Flathead Lake core areas. Consider actions that include the suppression and removal of non-native fish species.
4. Consider implementation of recovery actions identified in the USFWS Bull Trout Recovery Plan (USFWS, 2015b) and the associated Columbia River Headwaters Recovery Unit Implementation Plan (USFWS, 2015a).

Wolverine

The biological assessment determined that the land management plan may affect, but is not likely to jeopardize the North American wolverine (species proposed for listing). I considered the best available scientific information on the wolverine and other resources to develop alternatives to the proposed action and to make my decision to select alternative B modified. The land management plan contributes to ecological conditions needed to contribute to conservation of the wolverine. The wolverine is conserved by plan components for management areas, recreation guidelines, and guidelines for wolverine prey species. About 60 percent of modeled wolverine habitat is in designated wilderness and alternative B modified would add about 190,000 acres of recommended wilderness in modeled wolverine habitat. These management areas provide high quality habitat and are not suitable for motorized vehicle use. Outside wilderness and recommended wilderness, plan guidelines are added to reduce the risk of recreation impacts to females with dependent offspring during the time period when they are emerging from dens.

Based upon consideration of the best available scientific information, I conclude that plan components provide ecological conditions to conserve the wolverine by reducing the risk of future threats, considering the potential for future changes in climate. Subsequent to the release of the final EIS and draft ROD in December 2017, new science pertaining to the wolverine and their habitat was published. We reviewed new science and determined that no changes to the land management plan components are necessary to provide for conservation of the wolverine. We also concluded that these documents do not provide significant new information that was not previously considered in the development of alternatives and analysis of effects in the final EIS (Kuennen, 2018b).

Conservation of listed species

USFWS concluded that the Flathead National Forest's land management plan demonstrates a commitment to conservation of threatened and endangered species and will continue to contribute to the recovery of these species. Upon review of land management plan components that will be carried forward and of the new land management plan components that are being incorporated, the USFWS concluded that the features of the land management plan can be considered elements of a program for the conservation of endangered species and threatened species, as described in section 7(a)(1) of the Endangered Species Act. Further, the USFWS concluded that the land management plan demonstrates the Forest Service's commitment to the conservation of threatened and endangered species on NFS lands.

As the responsible official, I conclude that the land management plan includes management direction including desired conditions, standards, guidelines, suitability, and objectives that will aid recovery of federally listed species. Before signing this ROD, I verified that there had been no new listings or changes in status of threatened or endangered species or designated critical habitat subsequent to completion of our Section 7 consultation. I find this decision to be in compliance with the requirements of the Endangered Species Act.

Environmental justice

Minority and low-income populations (also known as environmental justice populations) are present in the communities surrounding the Forest. Under all the alternatives, the Forest and management activities would contribute to social and economic sustainability by providing key benefits to environmental justice communities, improving quality of life, and providing opportunities for income and jobs. The Forest would continue to provide for traditional, cultural, and spiritual values that are of particular interest to Native American tribes. No populations in the plan area would experience significant adverse human health impacts or environmental effects due to management actions proposed under any of the alternatives.

Federal Land Policy and Management Act

This act allows the granting of easements across NFS lands. The land management plan is strategic and programmatic in nature, providing guidance and direction to future site-specific projects and activities. The land management plan does not create, authorize, or execute any site-specific activity, although it does provide for the consideration of granting easements and rights-of-way. Forestwide desired conditions include strategic easements to provide reasonable public and administrative access. Therefore, the land management plan is consistent with this act.

Invasive species

Executive Order 13751 (amends Executive Order 13112) directs Federal agencies to prevent the introduction of invasive species; to detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner; to monitor invasive species populations accurately and reliably; to provide for restoration of native species and habitat conditions in ecosystems that have been invaded; to conduct research on invasive species and develop technologies to prevent introduction; to provide for environmentally sound control of invasive species; and to promote public education on invasive species and the means to address them. All of these actions are subject to the availability of appropriations. Forest Service Manual 2900, Invasive Species Management, sets forth Forest Service policy, responsibilities, and direction for the prevention, detection, control, and restoration of effects from aquatic and terrestrial invasive species (including vertebrates, invertebrates, plants, and pathogens).

The land management plan is strategic and programmatic in nature, providing guidance and direction to future site-specific projects and activities. The land management plan does not create, authorize, or execute any ground-disturbing activity, although it does provide for the consideration of certain types of activities that may have the potential to affect the dispersal of invasive species. The land management plan includes forestwide desired conditions, objectives, and guidelines that stress the need to treat new invaders and utilize best management practices that limit the introduction and spread of invasive species due to management activities. In addition, other direction serves to protect watershed, soil, riparian, and aquatic conditions in ways that will reduce management-caused disturbances that otherwise might increase weed spread or introduction. The monitoring program includes indicators associated with invasive plant species and the effectiveness of treatments. Therefore, the land management plan is fully compliant with Executive Order 13112.

Migratory Bird Treaty Act and Executive Order 13186

Executive Order 13186 (January 10, 2001), Responsibilities of Federal Agencies to Protect Migratory Birds, was issued by President Bill Clinton in furtherance of the purposes of the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Acts, the Fish and Wildlife Coordination Act, the Endangered Species Act, and the NEPA. This order requires including the effects of Federal actions on migratory birds as part of the environmental analysis process. On December 8, 2008, the Forest Service signed a

memorandum of understanding with the USFWS to complement the executive order (USDA-USFWS, 2008), and the Forest Service agreed to (a) incorporate migratory bird habitat and population objectives and recommendations into the agency planning process, in cooperation with other governments, State and Federal agencies, and non-Federal partners, and (b) strive to protect, restore, enhance, and manage the habitat of migratory birds and prevent the further loss or degradation of remaining habitats on NFS lands.

The Partners in Flight Bird Conservation Plan (Casey, 2000) supports the goal of maintaining long-term sustainability of migratory bird species and their habitats as specified by this act and executive order. The land management plan includes forestwide direction related to key stressors for migratory birds and their habitats, including direction to maintain or improve forest resilience, composition, and structure. Future site-specific activities or projects with the potential to impact migratory bird habitat will be analyzed with site-specific analysis under the NEPA processes and will comply with land management plan direction. Therefore, the land management plan is fully compliant with the Migratory Bird Treaty Act and Executive Order 13186.

Multiple-Use Sustained-Yield Act

Consistent with the Multiple-Use Sustained-Yield Act of 1960 (16 U.S.C. 528-531), the Forest Service manages NFS lands to sustain the multiple use of its renewable resources in perpetuity while maintaining the long-term health and productivity of the land. Resources are managed through a combination of approaches and concepts for the benefit of human communities and natural resources. As demonstrated in the final EIS and as required by the act, the land management plan guides sustainable, integrated management of the resources of the Forest in the context of the broader landscape, giving due consideration to the relative values of the various resources in particular areas. Therefore, the land management plan is fully compliant with this act.

National Environmental Policy Act

The NEPA requires that Federal agencies prepare detailed statements on proposed actions that may significantly affect the quality of the human environment. The Act's requirement is designed to serve two major functions:

- to provide decisionmakers with a detailed accounting of the likely environmental effects of proposed actions prior to adoption
- to inform the public of, and allow comment on, such efforts

The Forest Service has developed, gathered, and reviewed an enormous amount of information regarding the potential effects of each of the alternatives considered in the final EIS. This information expands and refines the data, analyses, and public input described in the NEPA documents associated with the draft plan and draft EIS (May 2016). My decision also considers the large amount of public input, including public meetings, comments on the Internet website, and comments received during the 120-day comment period for the draft EIS.

All substantive comments, written and oral, made on the 2016 draft EIS have been summarized and responded to in appendix 8 of the final EIS. During the course of this effort, the public involvement has led to changes in the analysis and the alternatives. I find that the environmental analysis and public involvement process the final EIS is based on complies with each of the major elements of the requirements set forth by the Council on Environmental Quality regulations for implementing the NEPA (40 CFR 1500-1508). My conclusion is supported by the following findings.

First, the final EIS considered a broad range of reasonable alternatives. The four alternatives considered in detail and 16 alternatives eliminated from detailed study in the final EIS encompass a broad range of

possible management allocations based upon issues identified through public involvement and scoping efforts.

Second, the final EIS reflects consideration of cumulative effects of the alternatives by evaluating past, present, and reasonably foreseeable future actions in the plan area, including Federal, State, tribal, and private lands. The environmental effects analysis estimates the potential effects of timber activities and timber-associated activities. The analysis of effects to wildlife was based on the assumption that these activities would take place with management constraints to ensure habitat availability at certain thresholds. Moreover, although non-Federal lands are outside the scope of this decision, effects from their management have been thoroughly considered and coordinated, to the extent practicable, in the final EIS.

Third, the final EIS uses scientific integrity to support the conclusions made. The decision here does not authorize timber sales or any other specific activity on the Forest. Site-specific decisions will be made on projects in compliance with the NEPA, the Endangered Species Act, and other environmental laws following applicable public involvement and appeal procedures.

National Forest Management Act

On April 9, 2012, the U.S. Department of Agriculture issued a final planning rule at 36 CFR 219 for NFS land management planning (2012 planning rule), 77 FR 68 (pp. 21160-21276). The sections of this ROD titled “Rationale for the Decision” and “Components of the Land Management Plan” document how the land management plan meets the 36 CFR 219 requirements.

National Historic Preservation Act

Section 106 of the National Historic Preservation Act requires each Federal agency to take into account the effects of its actions on historic properties prior to approving the expenditure of Federal funds on an undertaking or prior to issuing any license.

I find this decision is fully compliant with this act. The land management plan is a programmatic-level planning effort that will not directly authorize any ground-disturbing activities or projects. The land management plan includes desired conditions, objectives, guidelines, management strategies, and monitoring requirements for managing and protecting cultural resources listed in or eligible for the National Register of Historic Places.

Site-specific projects that are undertaken as a result of the direction in the land management plan will fully comply with laws and regulations that ensure the protection of heritage resources. Significant cultural resources will be identified, protected, and monitored in compliance with the National Historic Preservation Act. Tribal consultation will occur, and proposed activities will be coordinated with the Montana State Historic Preservation Office.

Roadless Area Conservation Rule

Management direction for inventoried roadless areas is compliant with the 2001 Roadless Area Conservation Rule (36 CFR 294 Subpart B, published at 66 FR 3244-3273). The 2001 Roadless Conservation Rule includes a prohibition on road construction and road reconstruction in inventoried roadless areas and prohibitions on timber cutting, sale, or removal except in certain circumstances. The land management plan is a programmatic-level planning effort and does not directly authorize any road construction, reconstruction, or timber removal. Therefore, the land management plan is fully compliant with these rules.

Travel Management Rule

The final rule for Travel Management; Designated Routes and Areas for Motor Vehicle Use (commonly referred to as the 2005 Travel Management Rule), implements provisions of Executive Orders 11644 and 11989, to address the use of off-road - motor vehicles on Federal lands. Regulations implementing this rule are found at 36 CFR Part 212. The portion of the rule pertaining to motor vehicle use is subpart B; the portion of the rule pertaining to motorized over-snow vehicle use is subpart C, which was updated in January 2015. The executive order's "minimization criteria" specify:

In designating National Forest System trails and areas on National Forest System lands, the responsible official shall consider effects on the following with the objective of minimizing:

1. Damage to soil, watershed, vegetation, and other forest resources;
2. Harassment of wildlife and significant disruption of wildlife habitats;
3. Conflicts between motor vehicle use and existing or proposed recreation uses of National Forest System lands or neighboring Federal lands; and
4. Conflicts among different classes of motor vehicle uses of National Forest System lands or neighboring Federal lands.

In addition, the responsible official shall consider:

5. Compatibility of motor vehicle use with existing conditions in populated areas, taking into account sound, emissions, and other factors.(36 CFR 212.55(b), Specific criteria for designation of trails and areas)

Prior to this plan revision, the Forest designated specific roads, areas, and trails for the use of motor vehicles (which includes off-road vehicles) that are displayed on the motorized vehicle use maps (MVUM) as required by 36 CFR 212 subpart B. The Forest also has completed subpart C through amendment 24 to the 1986 land management plan, and that is displayed in the Forest's Over-Snow Vehicle Use Map (OSVUM) as required by 36 CFR 212 subpart C. This programmatic plan decision does not authorize additional motor vehicle use, or prohibit existing motor vehicles uses, therefore those maps remain unchanged.

I am mindful that public uses are considered suitable unless plan components indicate they are not. Although certain uses may be identified as suitable under the plan, the plan itself does not require or authorize those uses to occur. Nevertheless, the land management plan provides a framework for what is "feasible, prudent, and reasonable" because I applied the 2005 Travel Management Rules' "minimization criteria" to this decision and, to the extent that current resource conditions allow, I strived towards achieving the overall assortment of multiple uses envisioned by the plan.

My decision to identify new areas suitable for motorized over-snow vehicles requires me to consider, with the objective of minimizing, the effects of that identified suitability on the resources and uses listed in 36 CFR 212.55(b) per the level of effects at the programmatic scale. "Minimization," as used in the regulations and the underlying executive order, is not defined. The Ninth Circuit Court of Appeals "assumes that the 2005 Travel Management Rule requires the Forest Service to comply with the minimization criteria in a manner that is feasible, prudent, and reasonable in light of the agency's multiple-use mandate" and does not impose an "absolute, discernible limit" on off-road motorized use (*WildEarth Guardians v. USFS*, 790 F.3d 920, 930 footnote 10 (9th Cir. 2015)). To that end, the following discussion provides what I believe is important context for understanding what minimization means for a

land management plan, here and now, on the Forest. It is also important to an understanding of why I believe my decision represents the feasible, prudent, and reasonable application of these criteria.

Our task when we started the land management plan revision effort was not to start from scratch. Instead, it was to adjust the existing and already amended plan where new information, including extensive public involvement, indicated it is feasible, reasonable, and prudent to do so. This is the approach in section 8 of Executive Order 11644, and this has been the approach taken by the Forest over the years. Section 8 of the executive order sets out requirements for monitoring use and adjusting designations over time. The agency “shall monitor the effects of the use of off-road vehicles on lands under their jurisdictions. On the basis of the information gathered, they shall from time to time amend or rescind designations of areas or other actions taken pursuant to this order as necessary to further the policy of this order.” The Forest has been monitoring the effects of off-road vehicle use when necessary to further the policy of this order or to otherwise further the purposes for which the National Forest was established and has amended motor vehicle designations, including but not limited to project-level decisions associated with implementing amendment 19 to the 1986 Flathead National Forest land management plan, as well as with the designations for motorized over-snow recreation with amendment 24 to the 1986 Flathead National Forest land management plan. The Forest monitors the effects of off-road vehicle use, including motorized over-snow vehicle suitability use, and, when necessary to further the policy of the regulation or to otherwise further the purposes for which the Forest was established, will undertake closure orders or amend or rescind off-road vehicle use, including motorized over-snow vehicle suitability use designations.

It is important to note that this decision is programmatic in nature. The land management plan sets desired conditions, objectives, standards, guidelines, and suitability to frame and guide future forest management decisions. The management area allocations and direction, as well as the recreation opportunity spectrum allocations, are my primary programmatic tool at the Forest-scale to minimize conflicts by identifying broad areas where motorized or nonmotorized use may or may not generally be suitable. Management areas with the plan component that indicates wheeled motorized travel is suitable are areas where motor vehicle use could be designated during future site-specific decision making. Plan suitability alone, does not mandate off-road vehicle use or indicate the area is subject to unmanaged off-road vehicle use. Public use must continue to adhere to the current MVUM and OSVUM until site-specific planning is completed.

I have carefully considered the requirements to avoid or minimize environmental harm in selecting alternative B modified. This alternative reflects the best overall arrangement of multiple uses while minimizing adverse environmental effects. For example, some commenters requested additional motorized over-snow vehicle opportunities be provided, whereas others requested motorized over-snow vehicle opportunities be more restricted, especially in key wildlife habitats or for a nonmotorized experience. The selected alternative includes additional quality motorized over-snow vehicle use suitability areas while allocating other areas as not suitable for motorized over-snow vehicle use that are important wildlife habitat areas or nonmotorized use areas.

For example, this decision makes limited adjustments to the areas available for motorized over-snow vehicle use, with an increase of 567 acres (0.08 percent) where over-snow motor vehicle use may occur. These adjustments consider the public input requesting additional routes for motorized over-snow vehicle use in the Canyon Creek-Big Creek and Skyland Challenge areas. In considering the use of management allocations to minimize effects of off-road vehicle use and to meet objective HU O2 in appendix A of the land management plan (to manage recreational activities to maintain lynx habitat), motorized over-snow vehicle suitability was reduced in some areas but increased in others. Areas suitable for motorized over-snow vehicle use were added in the Canyon Creek-Big Creek area and the Skyland Challenge area in response to public input. These areas are near existing areas that are very popular with users and are easily accessed. The Sullivan area, which is not as accessible as other areas, and is more difficult terrain

to ride, but provides quality habitat for the Canada lynx has been identified as not suitable for over-snow motor vehicle use. In addition, the new recommended wilderness area, Slippery Bill-Puzzle,, is no longer suitable. This allocation change will address potential conflicts with access into the Badger-Two Medicine nonmotorized area.

To further address the minimization criteria, I considered the entire Forest and the overall effects of off-road vehicles. The Forest is about 45 percent designated wilderness, with an additional 8 percent in recommended wilderness allocation and 6 percent in backcountry nonmotorized where off-road vehicles are prohibited. Current motor vehicle designations off roads are limited to 10 percent of all NFS trails on the Forest. Motorized over-snow vehicle use is suitable on about 31 percent of the Forest and not suitable on 69 percent of the Forest. The actual use of the 31 percent of the Forest suitable for motorized over-snow use is less than this, however, because terrain and vegetation also influence where motorized over-snow vehicles can physically go. Forestwide, the overall effects of off-road vehicles are therefore very limited on resources such as wildlife and soil, off-road vehicles have limited effects on user safety, and user conflicts are minimized to the extent practicable.

In summary, I believe the plan components in the selected alternative and the minor changes expected overall to the areas available for off-road recreation opportunities would reduce possible disturbance or harassment to wildlife and contribute to sustaining ecological conditions that support healthy wildlife populations within the framework of the Forest Service's multiple-use mandate. I also find the plan components to protect wildlife and aquatic habitat in this decision minimizes the damage to soil, watershed, vegetation, and other forest resources. My decision is based upon a consideration of the best available scientific information. This science is thoroughly discussed throughout the final EIS, in the response to comments (appendix 8 of the final EIS), and in planning record documentation.

I find the final EIS demonstrates continuing consideration of the minimization criteria required to protect the Forest resources, to promote the safety of users, and to minimize conflicts among the various uses of Flathead National Forest lands. Therefore, the land management plan is in compliance with the Travel Management Rule.

Wetlands and floodplains (Executive Orders 11988 and 11990)

These executive orders require Federal agencies to avoid, to the extent possible, short- and long-term effects resulting from the occupancy and modification of floodplains and the modification or destruction of wetlands. Forestwide standards and guidelines are provided for soil, water, wetlands, and riparian areas to minimize effects to floodplains and wetlands. They incorporate the best management practices of the Forest Service Soil and Water Conservation Handbook (USDA, n.d.).

Wild and Scenic Rivers Act

This act establishes a National Wild and Scenic Rivers System with three classifications of rivers: wild, scenic, and recreational. The purpose of the act is to protect the designated rivers "for the benefit and enjoyment of present and future generations" and to preserve the rivers' free-flowing condition, water quality, and outstandingly remarkable values.

Analysis of the designated wild and scenic rivers was included in the final EIS. Management area direction in the land management plan provides protection for the water quality, free-flowing conditions, and outstandingly remarkable values identified for those rivers. In addition, the Wild and Scenic Rivers Act requires an evaluation of eligible wild, scenic, or recreational rivers in land management planning. This was completed, and the 24 eligible rivers identified through the eligible wild and scenic river study process were analyzed in the final EIS. Management direction in the land management plan provides protection of free-flowing conditions and the outstandingly remarkable values identified for the eligible

segments of rivers on the Forest. Therefore, the land management plan is compliant with the Wild and Scenic Rivers Act.

Wilderness Act

The Wilderness Act of 1964 established a National Wilderness Preservation System to be administered in such a manner as to leave these areas unimpaired for future use and enjoyment as wilderness. It provides the statutory definition of wilderness and management requirements for congressionally designated areas.

Evaluation of designated wilderness was included in the environmental analysis for the land management plan, which includes specific management area direction to preserve and protect its wilderness character as required by the Wilderness Act. Therefore, the land management plan is compliant with this act.

Conflicts with Other Agency or Government Goals or Objectives

Contact, review, and public involvement with other Federal, State, tribal, and county agencies indicates no major conflicts between the land management plan and the goals and objectives of other governmental entities (Meridian Institute, 2017; USDA, 2017). Interagency meetings were convened as necessary, generally quarterly, since the beginning of the revision process to provide updates on the planning process as well as to ensure county, State, Federal, and tribal policies and interests were coordinated to the extent practicable. The planning record exhibits (00004-00021, 00307-00314) from these meetings demonstrate a commitment on the part of the Forest to meaningfully engage with interested and affected agencies; they also demonstrate the cooperation of these entities in the development of this land management plan. The related and equivalent county plans were considered and evaluated for consistency throughout the planning process. Flathead County has a natural resource use plan that the Flathead National Forest has determined is generally compatible with the proposed plan for the Forest, except for certain goals and objectives (listed under the sections of the Flathead County natural resource plan under forest management, fire and fuels management, recreation, and roads) that are incompatible with proposed plan components. The Forest is committed to working with all local counties to better address the impacts and benefits of management of the Forest.

Implementation

Project, Activity, Occupancy and Use Authorization, and Resource Plan Consistency with the Land Management Plan

As required by NFMA and the planning rule, subject to valid existing rights, all projects and activities authorized by the Forest Service after approval of this plan must be consistent with the applicable plan components (16 U.S.C. 1604(i)) as described at 36 CFR 219.15. Previously approved and ongoing projects and activities are not required to meet the direction of the land management plan and will remain consistent with the direction in the 1986 plan, as amended (USDA, 1986).

All project or activity approval documents, made after the effective date of the plan, will describe how the project or activity is consistent with the applicable plan components per section 1.1.1 of the land management plan. When a proposed project or activity would not be consistent with the applicable plan components, the responsible official shall take one of the following steps, subject to valid existing rights:

1. Modify the proposed project or activity to make it consistent with the applicable plan components;
2. Reject the proposal or terminate the project or activity;

3. Amend the plan so that the project or activity will be consistent with the plan as amended;
4. Amend the plan contemporaneously with the approval of the project or activity so that the project or activity will be consistent with the plan as amended. This amendment may be limited to apply only to the project or activity

Resource plans (example travel management plans) developed by the Forest that apply to the resources or land areas within the planning area must be consistent with the plan components. Resource plans developed prior to this plan decision will be evaluated for consistency with the plan and updated if necessary.

Authorizations for occupancy and use made before this plan approval may proceed unchanged until time of reauthorization. At time of reauthorization, all permits, contracts, and other authorizing instruments must be made consistent with the land management plan, subject to existing valid rights, as provided at §219.15(d).

Maintaining the Land Management Plan and Adapting to New Information

A land management plan is an integral part of an adaptive management including assessment, plan revision or amendment, and monitoring. This adaptive management cycle enables the Forest to identify and respond to changing conditions, changing public desires, and new information, such as that obtained through research and scientific findings. The land management plan monitoring program is an integral part of this adaptive management cycle, consisting of monitoring questions and indicators (see pages 25-26 of this final record of decision and chapter 5 of the land management plan for additional information about the monitoring plan).

Amending the Land Management Plan

A land management plan may be amended at any time based on a preliminary identification of the need to change the plan. The preliminary identification of the need to change the plan may be based on a new assessment, land management plan monitoring, or other documentation of new information, changed conditions, or changed circumstances. The amendment and administrative change process is described at 36 CFR 219.17(b)(2) of the 2012 planning rule.

Station Director Concurrence

Consistent with 36 CFR 219.2(b)(4), the acting director of the Forest Service's Rocky Mountain Research Station has advised the Flathead National Forest by letter dated July 17, 2017, that he concurs with the land management plan that is applicable to the Coram Experimental Forest, subject to language that has been included in the land management plan. He clarified that nothing in the applicable plan direction changes the requirement for consultation with the station director regarding any proposed activities that may affect ongoing research within the experimental forest (Phipps, 2017).

The Effective Date of the Plan Revision

This land management plan becomes effective 30 calendar days after publication of the notice of its approval in the Federal Register (36 CFR 219.17(a)).

The land management plan provides a framework and text to guide resource management options. It is a strategic, programmatic document and does not make project-level decisions or irreversible or irretrievable commitments of resources. Those kinds of commitments would be made after more detailed,

site-specific analysis and further public comment as part of the site-specific analysis under the NEPA process.

The Forest will also follow all laws, regulations, and policies that relate to managing National Forest System land. The land management plan is designed to supplement, not replace, direction from these sources. The final EIS lists and considers this direction for each of the revision topics and specific resources, but the plan does not repeat laws, regulations, or program management policy, practices or procedures.

Administrative Review and Objections

This decision to approve the revised land management plan for the Flathead National Forest was subject to the objection process identified in 36 CFR Part 219 Subpart B (219.50 to 219.62). A 60-day objection period on the draft records of decision, land management plan, NCDE Grizzly Bear Conservation Strategy land management plan amendments, and final EIS ran concurrently with an objection period for the Regional Forester's species of conservation concern for the Flathead National Forest. The objection period was initiated on December 14, 2017 with the publication of the notice of the opportunity to object in the newspapers of record. The Forest Service received seventy-four timely objections. Interested parties and objectors attended a series of meetings, April 11-13, 2018 in Kalispell, Montana to discuss objection issues. The reviewing officers issued their written responses to the objection issues on August 16, 2018. The written responses set forth the reasons for the response and contained instructions to the responsible officials. The written responses are the final decision by the U.S. Department of Agriculture on the objections.

The reviewing officer found that for most issues, the review of the final environmental impact statement, the land management plan, the draft ROD, and associated planning record established that the responsible official sufficiently addressed the objection issues and is in compliance with current law, regulation, and policy. For those issues that required additional clarification or modifications, the reviewing officer issued instructions to the Forest.

Modifications Made in Response to Instructions

As instructed by the reviewing officer, modifications to the final EIS, land management plan, and to the planning record have been completed as indicated below. The instructions are organized by topic and include a summary of the issue and the Forest response. Some instructions required clarification or review of new information. Others required minor modifications in plan components or management area allocations. All modifications fall within the effects considered across the range of alternatives and are responsive to issues identified in previous comment periods and during objections.

Plan framework

Overall scientific integrity

Issue summary: Multiple objectors alleged a lack of scientific integrity throughout the analysis in general or regarding a specific issue. There were specific objections regarding the science used to inform grizzly bear habitat, aquatic habitat, and other resource plan components, addressed separately. This response addresses the broad obligations under the NEPA and the NFMA as they relate to considering scientific information during planning and environmental analysis.

Instruction: Clarify in the record how scientific information that was provided in public comment, but not cited in the assessment or final EIS, was considered during plan development and analysis.

Forest response: Refer to “Role of Science” on pages 27-29 of this document. Two planning record exhibits ((FNF, 2018; Kuennen, 2014) further describe how scientific information was considered during the planning process.

Management areas

Swan Valley

Issue summary: Objectors contend the Forest management area 6c (high intensity) allocation in all or a portion of the Swan Valley should be changed to 6b (moderate intensity) to protect the high conservation values present in the area.

Instruction: Change management area allocation from high to medium-intensity vegetation management in four sections along Elk Creek in the Swan Valley and provide additional clarification about expected activities associated with the varying vegetation management intensities in management area 6 to address objectors concerns regarding interpretation of low, moderate, and high-intensity vegetation management.

Forest Response: Sections 3, 4, 5, and 9 (T20N, R17W) were changed from 6c (high-intensity vegetation management) to 6b (medium-intensity vegetation management). The GIS layer and maps 1-02, B-18, and B-24 have been updated. A total of 1,095 acres (0.3%) were changed to management area 6b in the Swan Valley. At the forest-wide level, whole percentages did not change. Edits (revising acres in tables) were made to volume 1 and the ROD.

Clarification about expected activities and examples associated with management intensity for general forest management areas 6a, 6b, and 6c can be found in the land management plan, Appendix C: Potential Management Approaches and Possible Actions (see pages C-55 through C-58).

Krause Basin

Issue summary: Objectors feel that Krause Basin should not be allocated as management area 7 – focused recreation. They believe the Forest should prohibit motor vehicle use and not mark motor vehicle access routes on the ground. Additional objection concerns include the potential for motorized use to affect quiet recreation and the request for protection of all hemlock forest in the Krause Basin from timber harvest.

Instruction: Develop a strategy for the effective management of trails in Krause Basin (installing route markers per Forest Service Manual direction at 7716.42, discouraging unauthorized uses through site-appropriate means, addressing adverse resource impacts when needed, working in partnership with the area’s neighbors and other interested parties), and provide additional clarification about the range of recreation management opportunities provided in management area 7 across the forest.

Forest Response: Within three years of this decision, the forest commits to starting a collaborative effort with local neighbors, users and other interested parties to assist the district in developing a management strategy for the Krause Basin area. The management strategy will address trailhead signing, route marker placement, illegal user-created trails and adverse resource impacts.

The Swan Valley Geographic Area description of Management Area 7 in the Krause Basin Area, was clarified with additional text on page 148 of the land management plan: This focused recreation area reflects natural conditions with some development in the form of trailhead, trail markers and trail signing.

Management focus will be on frequent site visits by forest employees, obliterating user-created trails and focusing use on designated trails through use of trailhead signage. Additional facilities, such as a toilet, may occur if needed to protect resources.

Forest products and suitability for timber production

Objectives within fiscal capability

Issue summary: Several objectors feel that the potential timber sale quantity (PTSQ) and potential wood sale quantity (PWSQ) stated in objectives FW-OBJ-TIMB 01 and 02 in the land management plan should clearly indicate that a higher level of timber harvest can be achieved with additional financial resources, while still meeting all plan requirements and restrictions.

Instruction: Address objectives within fiscal capability by clarifying in the ROD that land management plan objectives identified in the plan are based on current budget allocations and capacity and that they may be exceeded if additional funding and capacity is provided through budget allocations, new authorities, partnerships, or stewardship opportunities.

Forest response: A footnote was added to objectives FW-OBJ-TIMB-01 and 02 (page 74 of the land management plan) stating that “Estimates of timber outputs may be larger or smaller on an annual basis, or over the life of the plan, if legal authorities, management efficiencies, or unanticipated constraints change in the future. Modeling of the projected timber sale quantity under an unlimited budget and consistent with all plan components resulted in an average annual volume output in the first decade of 38 million board feet (7.6 million cubic feet) (final EIS, section 3.21.2).”

Designated areas

Amount and location of recommended wilderness

Issue summary: Objections to the areas recommended for inclusion in the National Wilderness Preservation System reflected a full spectrum of positions requesting more or less recommended areas or boundary adjustments to specific areas. Two objectors assert the loss of a bridge in the Bunker Creek area in 2015 is new information that should require an adjustment to the wilderness inventory boundary, and thus an adjustment to the Alcove-Bunker recommended wilderness area.

Instruction: Given the loss of the bridge in the Bunker Creek area after the inventory step was completed, please review the record and determine whether the changed circumstance requires reassessment of the wilderness inventory or re-evaluation of the wilderness characteristics of this specific area. If not, provide clarification of the factors considered in the planning record and final ROD.

Forest response: The primary function of the inventory step is to efficiently, effectively, and transparently identify all lands in the plan area that may have wilderness characteristics as defined in the Wilderness Act. The intent is to identify lands that may be suitable, so that they can be evaluated and to allow for public input and feedback. The inventory as a starting point for further evaluation was completed in September, 2014, after an opportunity for public comment was provided. The Bunker Creek area was included in the Bob North wilderness inventory area and evaluated for wilderness characteristics but was not recommended for wilderness in the draft EIS.

As changing conditions across the landscape over the course of a 5-year planning effort is inevitable, I must consider whether these changed conditions are important enough within the context of the overall land management planning effort to require reconsideration as recommended wilderness, as well as the analysis in the final EIS. In 2015, the Bear Creek Fire burned through the NFS Road 549 (Bunker Creek

Road) corridor and the wooden bridge structure spanning Bunker Creek. The area along NFS Road 549 west of this bridge was included in the Bob North wilderness inventory area and evaluated using the criteria identified in appendix G of the final EIS (pages 4-21 to 4-26). The NFS Road 549 east of the burned bridge was excluded from the wilderness inventory.

I reviewed the evaluation, and in concert with other factors such as effects to other resources and existing uses, my decision is still to exclude this area from wilderness recommendation to allow mechanical transport. Even though wildfire has softened edges created by the delineation between harvested and unharvested areas and skyline corridors, other factors such as existing uses, influenced my decision. Therefore, I have determined that the change condition to this area from the Bear Creek Fire does not warrant a new analysis or change in management area delineation. The majority of the Bunker Creek Road corridor is assigned management area 5a which is non-motorized year-long; there is a small area just west of the burned bridge that is within the 33 foot buffer of the road that is assigned to 6b, general forest, moderate intensity. See Moore (2018) for additional information.

Management of recommended wilderness

Mechanized transport and motorized use

Issue summary: Objections to the recommended wilderness management direction spanned the full spectrum of positions from removing the suitability component so mechanized transport and motorized uses would be allowed, to adding a standard with the suitability component to prohibit those uses.

Instructions:

1. Change standard MA1b-STD-02, specific to the Jewel Basin Hiking Area, to a suitability component;
2. Clarify in the final EIS the effects that led to the modification of alternative B to add the suitability plan component, MA1b-SUIT-06; and
3. Identify a strategy in the final record of decision for initiating site-specific planning per the changes in suitability for mechanized transport and motorized use in the land management plan direction.

Forest response:

1. Standard MA1b-STD-02 is now suitability component MA1b-SUIT-07: The Jewel Basin hiking area is not suitable for motorized use, mechanized transport, and stock use.
2. The draft land management plan (May 2016) varied suitability plan component (MA1b-SUIT-01) for recommended wilderness by alternative, as follows:
 - Alternative B: Existing mechanized transport, and motorized travel and uses, for example use of mountain bikes, are allowed to continue if such uses do not prevent the protection and maintenance of the social and ecological characteristics that provide the basis for wilderness designation.
 - Alternative C: Mechanized transport, and motorized travel and uses are not suitable.

I incorporated alternative C suitability of lands for mechanized transport and motorized uses in recommended wilderness from the draft EIS because the identification of suitability helps determine whether future projects and activities are consistent with desired conditions.

I considered how this plan component would help the Forest achieve the desired conditions for each recommended wilderness area. Because these lands have been selected as recommended wilderness, management should protect their wilderness characteristics in the long term. The areas being recommended for wilderness do not currently have significant mechanized transport use in them now, and there is some motorized over-snow vehicle use allowed in one recommended wilderness area (Slippery Bill-Puzzle). Clarification has been included in volume 2 of the final EIS on pages 376-377 about the effects described in the draft EIS that led to the modification of alternative B to include suitability plan component MA1b-SUIT-06: Mechanized transport and motorized use are not suitable in recommended wilderness areas.

3. The Forest will initiate site-specific planning per the land management plan's suitability direction within 3 years from the date of this decision where an existing order may need to be changed (e.g., changes to snowmobile use per the current oversnow vehicle motor vehicle use map or where an order may need to be issued, e.g., to prohibit mechanized transport).

Wildlife

Canada Lynx

Issue summary: Numerous specific issues were raised related to the adequacy of the Canada lynx analysis, the use of best available science, and whether or not the land management plan provides the ecological conditions necessary to contribute to the lynx recovery.

Instructions: Review the new science published by Kosterman et al. (2018), Holbrook et al. (Holbrook et al., 2018; Holbrook, Squires, Olson, DeCesare, & Lawrence, 2017) and the final Canada lynx species status assessment (USFWS, 2017b) to determine whether any changes in the land management plan are needed.

Forest response: The Flathead National Forest land management plan wildlife biologist and the Northern Region Canada lynx wildlife biologist reviewed the new science in consideration of the land management plan and final EIS (Kuennen, 2018a). Based on that review, I have determined that changes in the land management plan are not needed to provide for conservation and recovery of the Canada lynx.

A Canada lynx biologist team, comprised of researchers from the Rocky Mountain Research Station and biologists from the Northern Region, will continue to review new science and determine relevance and applicability to NFS land management. The Forest Service will continue to work with scientists at the Rocky Mountain Research Station (Squires, Holbrook) and USFWS (Kosterman and others) to promote lynx conservation and recovery. The land management plan includes plan components for Canada lynx and monitoring of Canada lynx habitat. Monitoring results will be reported to conservation partners and the public every two years. Changes to the land management plan can be made in the future, if warranted.

Wolverine

Issue summary: Objectors contend that the land management plan does not provide ecological conditions necessary to conserve wolverine.

Instructions: Review Heinemeyer et al. (2017) to determine whether additional plan components are needed as a result of this new information. If no additional plan components or analysis is warranted, make any needed clarification in the final EIS and discuss the new science and the determination in the final ROD.

Forest response: The Flathead National Forest land management plan wildlife biologist and the Northern Region wildlife biologist reviewed the new science related to wolverine (Heinemeyer et al., 2017), to determine whether any additional plan components or analysis are warranted (Kuennen, 2018b). Based on that review, I have determined, that changes in the land management plan and final EIS are not needed. The land management plan includes species-specific plan components for the wolverine and impacts to female wolverines were adequately analyzed in the final EIS. Plan management direction would support key ecosystem characteristics for wolverines and is consistent with the findings of Heinemeyer and others (2017).

Elk Security

Issue summary: Objectors contend the plan direction is inadequate to provide elk security habitat.

Instructions: Clarify guideline GA-SM-GDL-01 by changing the word “roads” to “routes” in order to include trails open to wheeled motorized use by the public.

Forest response: Land management plan component GA-SM-GDL-01 was revised per the instructions. The definition of **elk security habitat** was also revised for consistency.

Grizzly bear

Use of Draft NCDE Conservation Strategy and Lack of Final Habitat-Based Recovery Criteria

Issue summary: Objectors are concerned that the EIS improperly relied on the draft NCDE Grizzly Bear Conservation Strategy and a lack of final habitat-based recovery criteria. They believe this deprives the public of an opportunity to comment on actual decision documents.

Instruction: Review the final conservation strategy and habitat-based recovery criteria to determine whether changes to the plan and amendments are necessary, or whether additional analysis is warranted, prior to signing the final ROD.

Forest Response: The Flathead National Forest plan revision wildlife biologist and the Northern Continental Divide grizzly bear amendments wildlife biologist reviewed the final NCDE conservation strategy (IGBC, 2018) and the final habitat-based recovery criteria (USFWS, 2018). Neither the habitat-based recovery criteria nor the final NCDE conservation strategy provide significant new information that was not previously considered in the development of alternatives and analysis of effects in the final EIS (Warren & Kuennen, 2018a, 2018b).

No changes to the land management plan are necessary, with one exception, a minor rewording of guideline FW-GDL-REC-01 was made to fully capture one of the conservation strategy’s application rules. The intent was already implied in the guideline and the rewording does not alter the previous analysis or conclusions. The USFWS concurred that the wording change does not alter the analysis or conclusions of their biological opinion (planning record exhibits #00993 and #00994).

Watershed, riparian, and aquatic habitat plan direction

Riparian management objectives:

Issue summary: Objectors contend the land management plan fails to contain measurable habitat objectives for aquatic ecosystems and because riparian desired conditions are not described in “specific terms” the plan components do not comply with the 2012 planning rule.

Instruction: For FW-DC-WTR-04, clarify the meaning of “within reference ranges as defined by agency monitoring” to state “...within the range of conditions of the reference watersheds, as defined by agency monitoring.” This provides enough specificity to evaluate progress toward its achievement. Add text that cross-references FW-DC-RMZ-01 to FW-DC-WTR-04 and FW-DC-WTR-07 to clearly indicate the integrated nature of the three plan components as it relates to evaluating project-level management activities in riparian management zones.

Forest response: As instructed, the modifications were made to FW-DC-WTR-04, FW-DC-RMZ-01, and FW-DC-WTR-07 in the land management plan.

Riparian management zones

Issue summary: The objectors contend that plan direction to protect riparian management zones (RMZs) is insufficient, and provides less riparian protection than riparian habitat conservation areas (RHCAs) under INFISH.

Instruction: Revise FW-STD-RMZ-01 to include “or to the outer edges of riparian vegetation” in category 1. In category 2 include, “or to the outer edges of the 100-year floodplain”.

Forest response: As instructed, the modifications were made to FW-STD-RMZ-01 in the land management plan.

Watershed and multiscale analysis

Issue summary: Objectors feel that the land management plan should require completion of a watershed analysis prior to implementing project activities, as in INFISH.

Instruction: Clarify when multiscale analysis would be an appropriate tool in appendix C.

Forest response: Appendix C was edited to provide additional explanation and examples of how and when multiscale analysis could be used during project implementation. See page C-11 in the land management plan, appendix C.

Soil Productivity

Issue summary: The objector contends the soils analysis and land management plan standards for soil productivity are not based on the best available science.

Instruction: Correct the definition of detrimental soil disturbance in the EIS to include surface erosion.

Forest response: The following clarifications were made to the glossary, the definition of detrimental soil disturbance now includes surface erosion and an additional definition on surface erosion was added.

I have completed the response to the instructions from the Regional Forester and may proceed with signing the final record of decision for the land management plan.

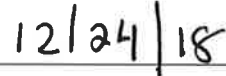
Contact Person

For additional information concerning this decision contact Rob Carlin, Forest Staff Officer for Natural Resources, Planning and Fire, at the Flathead National Forest Supervisor's Office, 650 Wolfpack Way, Kalispell, MT 59901, phone 406-758-5322.

Responsible Official



CHIP WEBER
Forest Supervisor
Flathead National Forest



DATE

References

- Casey, D. (2000). *Partners in flight bird conservation plan Montana*. Kalispell, MT: American Bird Conservancy. Planning record exhibit # 00351.
- CSKT. (2013). *Confederated Salish and Kootenai Tribes of the Flathead Reservation: Climate change strategic plan*. Retrieved from <http://nrd.csktribes.org/component/rsfiles/download?path=EP%252FCSKT.Climate.Change.Adaptation.Plan.pdf>.
- FBOCC. (2012). *Flathead County growth policy*. Kalispell, MT: Flathead County Board of County Commissioners (FBOCC).
- FNF. (2018). *Flathead National Forest Land Management Plan: Scientific integrity and the use of best available scientific information*. Kalispell, MT: Planning record exhibit # 00984.
- Headwaters Economics. Economic Profile System - Human Dimensions Toolkit (EPS-HDT). Headwaters Economics. Retrieved from <http://headwaterseconomics.org/tools/eps-hdt>.
- Heinemeyer, K. S., Squires, J. R., Hebblewhite, M., Smith, J. S., Holbrook, J. D., & Copeland, J. P. (2017). *Wolverine--Winter Recreation Research Project: Investigating the interactions between wolverines and winter recreation: Final report*. Retrieved from www.roundriver.org/wolverine. Planning record exhibit # 00760.
- Holbrook, J. D., Squires, J. R., Bollenbacher, B., Graham, R., Olson, L. E., Hanvey, G., . . . Lawrence, R. L. (2018). Spatio-temporal responses of Canada lynx (*Lynx canadensis*) to silvicultural treatments in the Northern Rockies, US. *Forest Ecology and Management*, 422, 114-124. Retrieved from <Go to ISI>://WOS:000433653900013.
- Holbrook, J. D., Squires, J. R., Olson, L. E., DeCesare, N. J., & Lawrence, R. L. (2017). Understanding and predicting habitat for wildlife conservation: the case of Canada lynx at the range periphery. *Ecosphere*, 8(9). Retrieved from <Go to ISI>://WOS:000410627100017.
- IGBC. (2018). *Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem*. Missoula, Montana, USA: Interagency Grizzly Bear Committee. Retrieved from http://igbconline.org/wp-content/uploads/2018/06/180615_NCDE_Conservation_Strategy.pdf.
- ILBT. (2013). *Canada lynx conservation assessment and strategy (3rd ed.)*. Missoula, MT: USDA Forest Service, USDI Fish and Wildlife Service, USDI Bureau of Land Management, and USDI National Park Service (Interagency Lynx Biology Team - ILBT). Retrieved from <https://www.fs.fed.us/biology/resources/pubs/wildlife/index.html>.
- Kosterman, M. K., Squires, J. R., Holbrook, J. D., Pletscher, D. H., & Hebblewhite, M. (2018). Forest structure provides the income for reproductive success in a southern population of Canada lynx. *Ecological Applications*, 28(4), 1032-1043. Retrieved from <Go to ISI>://WOS:000434092200014.
- Kuennen, R. (2014). *Consideration of BASI submitted by commenters on the Flathead forest plan revision*. Kalispell, MT: USDA Forest service, Flathead National Forest. Planning record exhibit # 00675.
- Kuennen, R. (2018a). *Review of Recent Science on Canada Lynx*. Kalispell, MT: Planning record exhibit # 00985.
- Kuennen, R. (2018b). *Review of Recent Science on Wolverine*. Kalispell, MT: Planning record exhibit # 00986.
- Kuennen, R., Van Eimeren, P., & Trechsel, H. (2017). *Biological assessment for threatened, endangered, and proposed species: Revised land and resource management plan for the Flathead National Forest*. Kalispell, MT: USDA Forest Service, Flathead National Forest. Retrieved from www.fs.usda.gov/goto/flathead/fpr. Planning record exhibit # 00550.
- MBCC. (2016). *2016 Missoula County growth policy*. Missoula, MT: Missoula Board of County Commissioners. Retrieved from <https://www.missoulacounty.us/government/community->

- [development/community-planning-services/projects/growth-policy-update/project-documents](#). Planning record exhibit # 00575.
- Meridian Institute. (2017). *Flathead National Forest plan revision stakeholder engagement final report phase II*. Dillon, CO: Meridian Institute. Planning record exhibit # 00648.
- Moore, M. (2018). *Bunker Creek Road Corridor and Recommended Wilderness*. Kalispell, MT: FNF. Planning record exhibit # 00992.
- MTDNRC. (2010). *Final environmental impact statement for the Montana Department of Natural Resources and Conservation forested trust lands habitat conservation plan*. Helena, MT: U.S. Department of the Interior, U.S. Fish and Wildlife Service and Montana Department of Natural Resources and Conservation Retrieved from <http://dnrc.mt.gov/divisions/trust/forest-management/hcp>.
- MTFWP. (2015). *Montana's 2015 state wildlife action plan final*. Helena, MT: Montana Fish, Wildlife and Parks. Retrieved from <http://fwp.mt.gov/fishAndWildlife/conservationInAction/actionPlan.html>, <http://fwp.mt.gov/fishAndWildlife/conservationInAction/swap2015Plan.html>.
- Phipps, J. (2017). *Letter from John Phipps to Chip Weber regarding Flathead National Forest plan components related to the Coram Experimental Forest*. Planning record exhibit # 00657.
- Quigley, T. M., Haynes, R. W., & Graham, R. T. (1996). *Integrated scientific assessment for ecosystem management in the interior Columbia Basin and portions of the Klamath and Great Basins*. Portland, OR: USDA Forest Service, Pacific Northwest Research Station. Retrieved from <https://www.fs.usda.gov/treearch/pubs/25384>.
- Squires, J. R., DeCesare, N. J., Olson, L. E., Kolbe, J. A., Hebblewhite, M., & Parks, S. A. (2013). Combining resource selection and movement behavior to predict corridors for Canada lynx at their southern range periphery. *Biological Conservation*, 157, 187-195. doi:10.1016/j.biocon.2012.07.018. Retrieved from <Go to ISI>://WOS:000316651200022, <http://www.sciencedirect.com/science/article/pii/S0006320712003382>.
- USDA-USFWS. (2008). *Memorandum of understanding between the U.S. Department of Agriculture, Forest Service and the U.S. Fish and Wildlife Service to promote the conservation of migratory birds (FS Agreement# 08-MU-1113-2400-264)*. Planning record exhibit # 00380.
- USDA-USFWS. (2013). *Conservation strategy for bull trout on USFS lands in western Montana*. Missoula, MT: USDA Forest Service, Northern Region; U.S. Fish and Wildlife Service, Montana Field Office; and the Lolo, Bitterroot, Flathead, Beaverhead-Deerlodge, Kootenai, and Helena National Forests. Retrieved from https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5427869.pdf.
- USDA. (1986). *Flathead National Forest management plan (2001 version)*. Kalispell, MT: USDA Forest Service, Flathead National Forest. Retrieved from <https://www.fs.usda.gov/main/flathead/landmanagement/planning>.
- USDA. (1997). *Conservation strategy--Howellia aquatilis: Flathead National Forest*. Kalispell, MT: USDA Forest Service, Flathead National Forest. Planning record exhibit # 00477.
- USDA. (2014). *Assessment of the Flathead National Forest, part 1, part 2, and appendices A-E*. Kalispell, MT: USDA Forest Service, Flathead National Forest. Retrieved from <https://www.fs.usda.gov/detailfull/flathead/landmanagement/planning/?cid=fseprd565644&width=full>.
- USDA. (2015). *Federal Register / Vol. 80, No. 44 / Friday, March 6, 2015 / Notices Flathead National Forest, Montana; Revision of the land management plan for the Flathead National Forest and an amendment of the Helena, Kootenai, Lewis and Clark, and Lolo National Forest plans to incorporate relevant direction from the Northern Continental Divide Ecosystem Grizzly Bear Conservation Strategy, Pages 12139-12142*. Planning record exhibit # 00156.
- USDA. (2017). *Flathead National Forest review of tribal, federal agency, state, and local government plans*. Kalispell, MT: USDA Forest Service, Flathead National Forest. Planning record exhibit # 00649.

- USDA. (2018a). *Final Environmental Impact Statement for the Flathead National Forest Land Management Plan and NCDE Grizzly Bear Amendments*. Kalispell, MT.
- USDA. (2018b). *Flathead National Forest Land Management Plan*. Kalispell, MT.
- USDA. (n.d.). Forest Service manual and handbooks. USDA Forest Service. Retrieved from <https://www.fs.fed.us/im/directives/>.
- USFWS. (2006). *Canada lynx conservation agreement: U.S. Forest Service and U.S. Fish and Wildlife Service, as amended Aug. 31, 2006*. Portland, OR: U.S. Fish and Wildlife Service. Planning record exhibit # 00618.
- USFWS. (2015a). *Columbia Headwaters recovery unit implementation plan for bull trout (Salvelinus confluentus)*. Kalispell, MT: U.S. Fish and Wildlife Service, Region 1. Retrieved from https://www.fws.gov/pacific/bulltrout/pdf/Final_Columbia_Headwaters_RUIP_092915.pdf.
- USFWS. (2015b). *Recovery plan for the coterminous United States population of bull trout (Salvelinus confluentus)*. Portland, OR: U.S. Fish and Wildlife Service, Pacific Region. Retrieved from <http://www.fws.gov/pacific/bulltrout/Planning.html>.
- USFWS. (2017a). *Biological opinion for the revised forest plan--Flathead National Forest*. Helena, MT: U.S. Fish & Wildlife Service, Ecological Services. Retrieved from www.fs.usda.gov/goto/flathead/fpr. Planning record exhibit # 00703.
- USFWS. (2017b). *Species Status Assessment for the Canada Lynx (Lynx canadensis) Contiguous United States Distinct Population Segment, Version 1.0*. Lakewood, Colorado Retrieved from https://www.fws.gov/mountain-prairie/es/species/mammals/lynx/SSA2018/01112018_SSA_Report_CanadaLynx.pdf.
- USFWS. (2017c). *Threatened, endangered and candidate species for the Flathead National Forest, 11/17/2017*. Helena, MT: U.S. Fish and Wildlife Service, Ecological Services. Planning record exhibit # 00680.
- USFWS. (2018). *Habitat-based recovery criteria for the grizzly bear population in the Northern Continental Divide Ecosystem*. Missoula, MT Retrieved from https://www.fws.gov/mountain-prairie/es/species/mammals/grizzly/20180516_SignedFinal_HBRC_NCDE_Grizz.pdf.
- Warren, N., & Kuennen, R. (2018a). *Review and Finding: Final Conservation Strategy for the Grizzly Bear in the NCDE* Kalispell MT: FNF. Planning record exhibit # 00987.
- Warren, N., & Kuennen, R. (2018b). *Review and Finding: Habitat-Based Recovery Criteria for the NCDE*. Kalispell, MT: FNF. Planning record exhibit # 00988.